

AE Order Number Banner

Report Description

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App Number: pGVG1600639104

3RP - 469

BP AMERICA PRODUCTION COMPANY

11/14/2017

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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.

Release Notification and Corrective Action OPERATOR Subsequent Report **Final Report** Name of Company: BP Contact: Steve Moskal Telephone No.: 505-326-9497 Address: 200 Energy Court, Farmington, NM 87401 Facility Name: Mudge LS 006 Facility Type: Natural gas well Surface Owner: Federal Mineral Owner: Federal API No. 3004510843 LOCATION OF RELEASE Unit Letter Section Township Feet from the North/South Line Feet from the East/West Line County: San Juan Range 11 31N 11W 1.033 South 869 West A Latitude 36.90884 Longitude -107.96561 NATURE OF RELEASE Type of Release: condensate and produced water Volume of Release: Unknown Volume Recovered: none Source of Release: Flow line and BGT Date and Hour of Occurrence: Date and Hour of Discovery: August 8, 2014: 1:30 PM unknown Was Immediate Notice Given? If YES, To Whom? 🗌 Yes 🛛 No 🗌 Not Required OIL CONS. DIV DIST. 3 By Whom? Date and Hour If YES, Volume Impacting the Watercourse. Was a Watercourse Reached? SEP 1 2 2017 Yes X No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* During construction operations to replace the onsite BGTs impacted soil was discovered. The impacted soil was excavated and transported off site for landfarm treatment. To date approximately 12,212 yards³ have been removed from or treated at the site. Groundwater monitoring wells were installed and sample results received on July 1, 2015 confirmed impacts. Additional monitoring wells were installed following an approved remediation work plan during the first half of August 2016. Final soil impacts were treated via soil shredding. The details and results of the soil shredding activities are detailed in the attached report. Describe Area Affected and Cleanup Action Taken.* Onsite hydrocarbon impacted soil was excavated. The excavated soil comprising of approximately 6,000 cubic yards were removed from the site. Additional monitoring wells recently installed suggested groundwater impacts are confined to a perched water zone. BP has performed purging the water from this zone in an effort to determine whether the water is perched or not. At this time it is strongly believed that the water is perched and is disconnected from any water bearing aquifer. The attached report details the recent soil remediation project where an additional 6,212 cubic yards of soil were successfully remediated via soil shredding. The final extents were reached in the lateral and vertical directions, with the exception of a plug below a high pressure natural gas collection lain and in the area of a large, steep, vegetated hillside where substantial excavation of non-impacted soil would have to occur. The excavation of the clean overburden would pose a significant threat to safety and future erosion if executed. At this time, BP proposes no further soil remediation action at the site. Continued monitoring of the perched water will be performed and reported at a later date. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. **OIL CONSERVATION** Signature: Stores May Approved by Environmental Specialist: Printed Name: Steve Moskal Approval Date: Expiration Date Title: Field Environmental Coordinator E-mail Address: steven.moskal@bp.com Conditions of Approval: Attached X Phone: 505-326-9497 Date: September 12, 2017

* Attach Additional Sheets If Necessary #NCS 1423254574

200

Smith, Cory, EMNRD

| From: | Smith, Cory, EMNRD |
|----------|--|
| Sent: | Tuesday, November 14, 2017 10:50 AM |
| То: | Moskal, Steven |
| Cc: | Fields, Vanessa, EMNRD; Powell, Brandon, EMNRD; Bayliss, Randolph, EMNRD |
| Subject: | Mudge LS 6 Subsequent Approval 3RP-469 |

Steve,

OCD has reviewed and approved the Subsequent C-141 report detailing additional soil excavation at the Mudge LS 6 (30-045-10843) and has approved the report with the following conditions of approval.

- BP will complete additional ground water delineation in Zones 9, and the southern portions of zones 19, 20,21 and 22 as ground water was observed during the excavation no later than February 16, 2017.
- BP will submit to OCD Santa Fe a detailed report of the ground water investigations within 60 Days of completing additional ground water delineation. (OCD considers delineation to be completed on the date when the well is cased.)

If you have any additional questions please give me a call.

Cory Smith Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 115 cory.smith@state.nm.us

Remedial Excavation of Hydrocarbon Impacted Soils

OIL CONS. DIV DIST. 3

SEP 1 2 2017

Mudge LS 6 (M) Sec 11 – T32N – R11W API: 30-045-10843 San Juan County, New Mexico

Prepared for: BP America Production Co. Farmington, New Mexico

Prepared by: Blagg Engineering, Inc. P.O. Box 87 Bloomfield, New Mexico 87413 (505)632-1199

> September 11 2017

REMEDIAL EXCAVATION OF HYDROCARBON IMPACTED SOILS

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REMEDIAL EXCAVATION OF HYDROCARBON IMPACTED SOILS MUDGE LS 6

INTRODUCTION

Blagg Engineering Inc. (BEI) has been retained by BP America Production Co. (BP) to monitor, sample and document environmental remediation of hydrocarbon impacts at the Mudge LS 6, a natural gas well located in rural San Juan County, New Mexico at (M) Sec. 11 - T32N - R11W (Figure 1). Hydrocarbon impacts at the site were first discovered in August 2014 during routine closure at a 95 barrel below grade tank (BGT) and a 21 barrel BGT. Both BGT's appeared to be located at spots previously used as unlined earthen pits used for fluid disposal, a common practice permitted by both New Mexico Oil Conservation Division (NMOCD) and the U.S. Bureau of Land Management (BLM) until the mid 1990's. Other sources may have contributed to site impacts but could not be accurately identified. BP began initial remedial excavations of on-site impacts on October 6, 2014 and completed removal of on-site impacts on November 3, 2014. Work to continue remediation of off-site impacts could not be immediately progressed due to regulatory restrictions of moving into a dry ephemeral drainage south of the well pad.

Locally the geologic setting consists of quaternary alluvium (primarily silt and sand) sitting on the Nacimiento formation, a dense siltstone/shalestone/sandstone formation. At the Mudge LS 6 the Nacimiento is primarily sandstone that has been eroded with steep, deep ravines filled with alluvium. During on-site impact removal of the alluvium, isolated pockets of perched groundwater were identified in the low erosional spots of the sandstone. Following the on-site remediation, groundwater monitor wells were installed in these low spots and at surrounding points to quantify the perched water characteristics. It was determined that the perched water was not continuous or connected to a larger groundwater basin (see report by Souder, Miller and Associates, July, 2016).

Following regulatory approval to proceed, removal of off-site impacts began on May 17, 2017 and this work was completed on June 19, 2017.

REMEDIATION ACTIVITIES

Site remediation consisted of 2 separate activities: (1) excavation of off-pad impacted soils and sandstone south of the well pad until site closure standards had been achieved, and (2) on-site treatment of impacted media to remove hydrocarbon impacts to below site closure standards, followed by placing the treated soil back into cleaned up areas of the remedial excavation. The procedures to carry out these activities are discussed below.

The closure standard for the site as determined by the NMOCD and BLM was based on the potential risk to ground and surface water from hydrocarbon impacts. At this site the closure standard was established as follows:

Total Petroleum Hydrocarbons (TPH) = 100 mg/Kg (parts per million) Benzene = 10 mg/Kg Benzene, Toluene, Ethyl-Benzene and Total Xylenes (BTEX) combined = 50 mg/Kg Total Chlorides = 600 mg/Kg

Excavation of Impacted Media to Achieve Site Remediation

Removal of hydrocarbon impacted media began on May 17, 2017 using excavators to strip clean, un-impacted soils, excavate impacted loose soils and remove any impacted sandstone immediately below the loose soils. The excavated impacted soils were placed on the well pad for on-site treatment to remove hydrocarbons via shredding and chemical treatment (discussed below). Excavation began at the southern limit of the well pad and continued towards the south, south west and south east until composite samples submitted for laboratory analytical testing confirmed that sidewalls and base areas were within site closure standards. The final excavating and sampling was concluded on June 19, 2017. The excavated area was approximately 200' (north to south) x 140' (west to east) with maximum depths of approximately 35' below the original well pad surface (Figure 2).

Closure sampling was progressive as the excavation advanced. Sampling areas were marked out on the excavation walls and base for collection of 5-point composites from each area. Sampling was primarily performed using an excavator trackhoe due to the danger of personnel entering the excavation because of the risk of collapsing sidewalls. All closure sampling was witnessed by either or both the NMOCD and BLM. Representative composite portions of sample were placed into a gallon sized Ziploc® baggie for field headspace analysis of organic vapors with a calibrated IonScience Tiger model photo-ionization detector (PID) containing a 11.2 eV lamp. Split samples were placed into a 4-ounce laboratory supplied jar with Teflon® lid, labeled and placed on ice in an ice chest for further laboratory testing. The jarred samples were hand delivered to a representative of Hall Environmental Analytical Laboratories for analysis via U.S. EPA Method 8021B (volatile organics limited to benzene, toluene, ethyl benzene and total xylenes), U.S. EPA Method 8015 (gasoline range (GRO), diesel range (DRO) and motor oil range (MRO) organics), and chlorides via U.S. EPA Method 300. A chain-of-custody followed the samples.

Three (3) sampling areas did not reach the site closure standard (Zones 13, 14 & 20). A variance to the closure standard was granted by NMOCD/BLM for Zones 13 and 14 due to the presence of an active, high pressure natural gas line immediately adjacent to those areas. A variance for Zone 20 was granted do its proximity to a very steep hillside that would have required removal of a substantial area of vegetation protecting that hillside from erosion. Summary laboratory analytical results are included in <u>Table 1:</u> Summary Excavation Closure Analytical Data. Laboratory test reports are attached in Appendix B. There were a total of 22 separate composite sampling areas.

Remediation of Excavated Impacted Media via Soil Shredding

BP contracted remediation of excavated media to a private enterprise, Unlimited Construction, for on-site treatment. A proprietary process (termed 'soil shredding') was used to crush the excavated material and then chemically treat the fine grained soils with hydrogen peroxide to remove hydrocarbons. Following soil shredding, the treated material was sampled to confirm that site closure standards had been achieved and then placed back into remediated portions of the excavation. This process progressed at the same approximate rate as the excavation advanced.

Treated soil was placed into labeled stockpiles prior to closure sampling. This sampling was performed using an excavator trackhoe to dig into each pile and collect composite samples for initial field analysis and subsequent laboratory testing. Sample handling, regulatory witnessing, preservation, chain-of-custody and laboratory test procedures were the same as previously described.

At the onset of the soil shredding process one (1) pile (Pile 10) failed on first testing. This can be a common occurrence with the initial shredding process until the proper chemical balance for remediation is determined. This pile was allowed to further remediate over time as additional chemical reaction occurred and subsequent testing found those soils conformed to the site closure standards. A total of 6,212 cubic yards of soil was treated and placed back into the remedial excavation. A summary of treated soil laboratory test data is presented in <u>Table 2, Summary</u> <u>Treated Soil Pile Analytical Data</u>. Laboratory test reports are attached in Appendix C.

CONCLUSIONS AND RECOMMENDATIONS

- 1) Hydrocarbon impacted soil and bedrock at the BP operated Mudge LS 6 has been successfully excavated and treated. Excavation sampling and analytical testing has confirmed that 19 of 22 separate sampling zones within the remedial excavation test below site closure standards. The three (3) zones with residual hydrocarbon impacts exceeding site closure standards (Zones 13, 14 and 20) are not indicated to contribute a risk to surface or groundwater. Removal of additional soils in Zones 13 and 14 is not presently feasible due to an active third party high pressure natural gas line. Removal of additional soils in Zone 20 will require disturbance of a substantial volume of vegetation on a steep hillside, resulting in accelerated future erosion. Therefore, no additional site remediation of impacts is indicated. Regulatory closure of remedial activities is recommended.
- 2) All soils treated on-site via the proprietary 'soil shredding' process and backfilled into the remedial excavation have demonstrated via analytical testing to be within site closure standards. These treated soils are not indicated to contribute a risk to surface or groundwater. No additional treatment is recommended.

CLOSURE AND LIMITATIONS

This report has been prepared for the exclusive use of BP America Production Company as it pertains to hydrocarbon impact remediation at the Mudge LS 6 in San Juan County, New Mexico. The data presented herein is based on visual observations, subsurface soil conditions encountered at sampling locations and on information reported by analytical laboratory testing of soils. This report does not reflect variations which may exist between sampling locations.

I certify that the work performed by Blagg Engineering, Inc. as described in this report was directed by my supervision, and that I am personally familiar with the remedial actions and the contents of this report.

Submitted by: *Blagg Engineering, Inc.*

Jeffrey C. Blagg, PE NMPE 11607

TABLES

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Table 1: Summary Excavation Closure Analytical DataTable 2: Summary Treated Soil Pile Analytical Data

Table 1

BP America Mudge LS 6 API: 30-045-10843

Summary Offsite Excavation Closure Analytical Data

| Sample ID | Date | BTEX (mg/Kg) | TPH GRO (mg/Kg) | TPH DRO (mg/Kg) | TPH MRO (mg/Kg) | TPH Total (mg/Kg) | Chloride (mg/Kg) | Comments |
|---------------------------|-----------|-----------------|-----------------------|-----------------------|-----------------------|-------------------------|---------------------|------------------|
| Zone 1 (6'-18') | 5/19/2017 | 0.13 | 4.7 | ND | ND | 4.7 | ND | |
| Zone 2 (6'-18') | 5/19/2017 | ND | 3.5 | ND | ND | 3.5 | 30 | |
| Zone 3 (9'-18') | 5/19/2017 | ND | ND | ND | ND | ND | 49 | |
| Zone 4 (9'-18') | 5/19/2017 | ND | ND | ND | ND | ND | 46 | |
| Zone 5 (Base, 20'-25') | 5/23/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 6 (Base, 22'-25') | 5/23/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 7 (10'-22') | 5/24/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 8 (8'-22') | 5/31/2017 | 6.71 | 91 | 29 | ND | 120 | ND | |
| Zone 9 (Base @ 27') | 6/2/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 10 (7'-17') | 6/6/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 11 (12'-22') | 6/9/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 12 (7'-25') | 6/9/2017 | ND | ND | ND | ND | ND | 41 | |
| Zone 13 (7'-25') | 6/9/2017 | 1.2 | 74 | 130 | ND | 204 | ND | Variance Granted |
| Zone 14 (7'-25') | 6/9/2017 | 6.49 | 270 | 180 | ND | 450 | ND | Variance Granted |
| Zone 15 (Base @ 28') | 6/9/2017 | ND | 7.7 | ND | ND | 7.7 | ND | |
| Zone 16 (20'-30') | 6/19/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 17 (25'-35') | 6/19/2017 | ND | 4.2 | ND | ND | 4.2 | ND | |
| Zone 18 (25'-35') | 6/19/2017 | ND | ND | 25 | ND | 25 | ND | |
| Zone 19 (Base @ 38') | 6/19/2017 | ND | ND | ND | ND | ND | ND | |
| Zone 20 (25'-35') | 6/19/2017 | 1.5 | 59 | 90 | ND | 149 | ND | Variance Granted |
| Zone 21 (25'-35') | 6/19/2017 | ND | ND | 20 | ND | 20 | ND | |
| Zone 22 (25'-35') | 6/19/2017 | ND | ND | ND | ND | ND | ND | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| NMOCD Closure Standard | | 50 | | | | 100 | 600 | |

ND = not detected.

. Depths are approximate from original wellpad grade.

Table 2

BP America Mudge LS 6 API: 30-045-10843

Treated Soil Pile Test Results

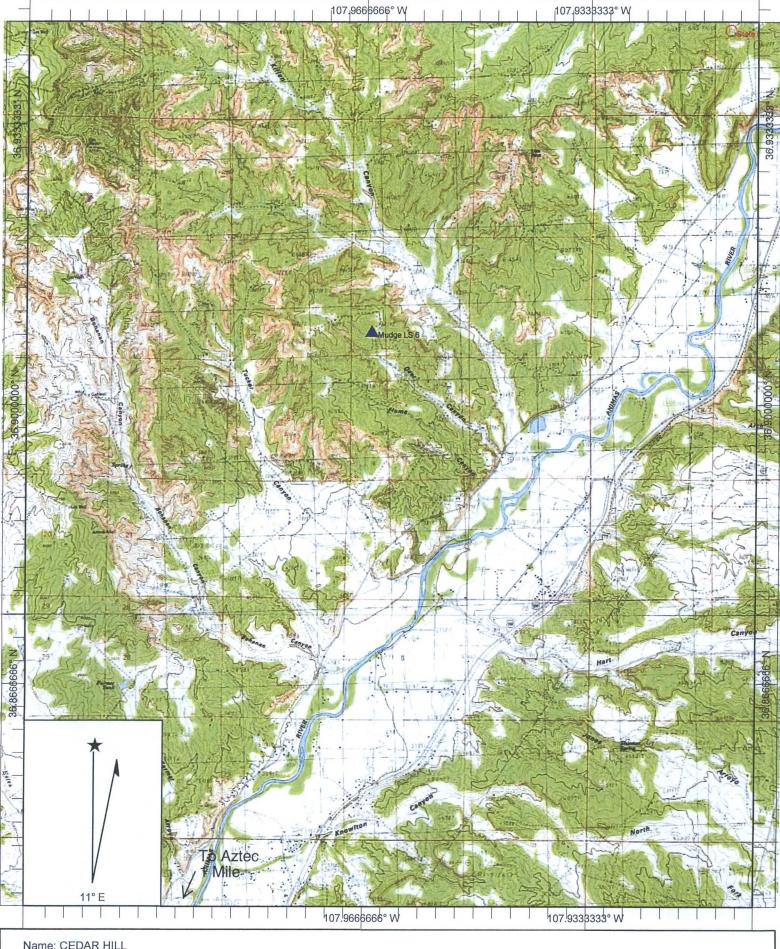
| | | | | Field | | TPH | TPH | TPH | TPH | |
|---------------|-------------|-----------|-----------|-------|---------|---------|---------|---------|---------|----------|
| Pile ID | Volume | Date | Date | OVM | BTEX | GRO | DRO | MRO | Total | Chloride |
| | (CY) | Created | Sampled | (ppm) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) |
| TSP-1 | 100 | 5/19/2017 | 5/23/2017 | 0.6 | ND | ND | ND | ND | ND | ND |
| TSP-2 | 100 | 5/19/2017 | 5/23/2017 | 1.2 | ND | ND | ND | ND | ND | ND |
| TSP-3 | 100 | 5/19/2017 | 5/23/2017 | 0.6 | ND | ND | ND | ND | ND | ND |
| TSP-4 | 100 | 5/19/2017 | 5/23/2017 | 0.2 | ND | ND | ND | ND | ND | ND |
| TSP-5 | 100 | 5/19/2017 | 5/23/2017 | 1.3 | ND | ND | 14 | ND | 14 | ND |
| TSP-6 | 100 | 5/19/2017 | 5/23/2017 | 0.7 | ND | ND | ND | ND | ND | ND |
| TSP-7 | 100 | 5/19/2017 | 5/23/2017 | 0.9 | ND | ND | ND | ND | ND | ND |
| TSP-8 | 100 | 5/24/2017 | 5/24/2017 | 70.7 | 0.12 | 12 | 15 | ND | 27 | ND |
| TSP-9 | 100 | 5/24/2017 | 5/24/2017 | 91.8 | 0.08 | 11 | 19 | ND | 30 | ND |
| TSP-10 | 100 | 5/24/2017 | 5/24/2017 | 141 | 0.095 | 18 | 40 | 66 | 124 | ND |
| TSP-10R | 100 | 5/24/2017 | 5/25/2017 | 26.6 | ND | ND | 38 | 86 | 124 | ND |
| TSP-10R2 | 100 | 5/24/2017 | 5/26/2017 | 56.7 | ND | 4.9 | 18 | ND | 22.9 | ND |
| TSP: 11-15 | 500 | 5/24/2017 | 5/25/2017 | 67.5 | ND | ND | ND | 12 | 12 | ND |
| TSP-16 | 500 | 5/30/2017 | 5/31/2017 | 283 | ND | ND | 13 | ND | 13 | ND |
| TSP-17 | 500 | 6/1/2017 | 6/2/2017 | 375 | ND | ND | ND | ND | ND | ND |
| TSP-18 | 500 | 6/5/2017 | 6/6/2017 | 65.8 | ND | ND | ND | ND | ND | ND |
| TSP-19 | 500 | 6/6/2017 | 6/7/2017 | 398 | 0.22 | 31 | 14 | ND | 45 | ND |
| TSP-20 | 500 | 6/7/2017 | 6/7/2017 | 939 | 0.38 | 44 | 15 | ND | 59 | ND |
| TSP-21 | 500 | 6/6/2017 | 6/9/2017 | 173 | ND | 14 | ND | ND | 14 | ND |
| TSP-22 | 500 | 6/6/2017 | 6/9/2017 | 120 | 0.088 | 17 | 11 | ND | 28 | ND |
| TSP-23 | 500 | 6/12/2017 | 6/13/2017 | 32.5 | ND | 17 | ND | ND | 17 | ND |
| TSP-24 | 356 | 6/19/2017 | 6/20/2017 | 89 | ND | ND | ND | ND | ND | ND |
| TSP-25 | 356 | 6/19/2017 | 6/20/2017 | 184 | ND | ND | 14 | ND | 14 | ND |
| Total | 6,212 CY | | | | | | | | | |

Site Closure Standard: 100 ppm total TPH

APPENDIX A FIGURES

Figure 1: Site Location Topographic Map

Figure 2: Remedial Excavation Sampling Zones



Name: CEDAR HILL Date: 9/8/2016 Scale: 1 inch equals 4000 feet

Caption: BP America Mudge LS 6

Copyright (C) 1997, Maptech, Inc.

May 19, 2017 Sidewall Closure Samples: Z1 (6'-18') OVM = 165 ppm, TPH = 4.7 ppm Z2 (6'-18') OVM = 62 ppm, TPH = 3.5 ppm Z3 (9'-18') OVM = 5.3 ppm, TPH = ND Z4 (9'-18') OVM = 2.0 ppm, TPH = ND

May 23, 2017 Base Closure Samples: Z5 (20'-25') OVM = 92 ppm, TPH = ND Z6 (22'-25') OVM = 117 ppm, TPH = ND

May 24, 2017 Sidewall Closure Sample: Z7 (10'-22') OVM = 17.7 ppm, TPH = ND

May 31, 2017 Sidewall Closure Sample: Z8 (8'-22') OVM = 3,527 ppm, TPH = 120 ppm

June 2, 2017 Base Closure Sample: Z9 (27') OVM = 5.1 ppm, TPH = ND

June 6, 2017 Sidewall Closure Sample: Z10 (7'-17'), TPH = ND

June 9, 2017 Closure Samples: Z11 (12'-22'), OVM = 3.7 ppm, TPH = ND Z12 (7'-25'), OVM = 168 ppm, TPH = ND Z13 (7'-25'), OVM = 4,355 ppm, TPH = 204 ppm Z14 (7'-25'), OVM = 5,090 ppm, TPH = 450 ppm Z15(Base@28'), OVM = 232 ppm, TPH = 7.7 ppm

Informational Grabs from Excavation: Grab @ 25' OVM = 2,361 ppm, TPH = 100 ppm Grab @ 22' OVM = 3,030 ppm, TPH = ND Grab 2 @ 22' OVM = 3,596 ppm, TPH 580 ppm (Note: This area subsequently excavated)

Google earth



Completed June 19, 2017

APPENDIX B

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Excavation Closure - Laboratory Analytical Data Reports



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

May 23, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1705B26

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/20/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical Report |
|--------------------------|
| Lab Order 1705B26 |

Date Reported: 5/23/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering Project: MUDGE LS 6 Lab ID: 1705B26-001 | Client Sample ID: ZONE 1 Collection Date: 5/19/2017 1:08:00 PM Matrix: SOIL Received Date: 5/20/2017 11:15:00 A | | | | | |
|---|---|--------|-----------|----|-----------------------|---------|
| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/22/2017 11:58:28 AM | 31886 |
| EPA METHOD 8015D MOD: GASOLINE | RANGE | | | | Analyst: | RAA |
| Gasoline Range Organics (GRO) | 4.7 | 3.5 | mg/Kg | 1 | 5/22/2017 1:02:49 PM | R42963 |
| Surr: BFB | 97.5 | 70-130 | %Rec | 1 | 5/22/2017 1:02:49 PM | R42963 |
| EPA METHOD 8015M/D: DIESEL RANG | | 6 | | | Analyst: | TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 5/22/2017 11:38:09 AM | 31865 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/22/2017 11:38:09 AM | 31865 |
| Surr: DNOP | 97.3 | 70-130 | %Rec | 1 | 5/22/2017 11:38:09 AM | 31865 |
| EPA METHOD 8260B: VOLATILES SHO | RT LIST | | | | Analyst: | RAA |
| Benzene | ND | 0.018 | mg/Kg | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Toluene | ND | 0.035 | mg/Kg | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Ethylbenzene | ND | 0.035 | mg/Kg | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Xylenes, Total | 0.13 | 0.070 | mg/Kg | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 70-130 | %Rec | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | %Rec | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Surr: Dibromofluoromethane | 115 | 70-130 | %Rec | 1 | 5/22/2017 1:02:49 PM | SL42963 |
| Surr: Toluene-d8 | 108 | 70-130 | %Rec | 1 | 5/22/2017 1:02:49 PM | SL42963 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

| Analytical Report | |
|--------------------------|--|
| Lab Order 1705B26 | |

Date Reported: 5/23/2017

Hall Environmental Analysis Laboratory, Inc.

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

| CLIENT: Blagg Engineering | | | Client Sampl | e ID: ZC | DNE 2 | | | | | |
|--------------------------------|--------------|---------------------------------------|--------------|--------------------------------------|-----------------------|---------|--|--|--|--|
| Project: MUDGE LS 6 | | Collection Date: 5/19/2017 1:15:00 PM | | | | | | | | |
| Lab ID: 1705B26-002 | Matrix: S | SOIL | Received 1 | Received Date: 5/20/2017 11:15:00 AM | | | | | | |
| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch | | | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT | | | | |
| Chloride | 30 | 30 | mg/Kg | 20 | 5/22/2017 12:35:42 PM | 31886 | | | | |
| EPA METHOD 8015D MOD: GASOLI | NE RANGE | | | | Analyst | RAA | | | | |
| Gasoline Range Organics (GRO) | 3.5 | 3.3 | mg/Kg | 1 | 5/22/2017 1:32:54 PM | R42963 | | | | |
| Surr: BFB | 96.6 | 70-130 | %Rec | 1 | 5/22/2017 1:32:54 PM | R42963 | | | | |
| EPA METHOD 8015M/D: DIESEL RA | NGE ORGANICS | | | | Analyst | TOM | | | | |
| Diesel Range Organics (DRO) | ND | 9.5 | mg/Kg | 1 | 5/22/2017 12:00:34 PM | 31865 | | | | |
| Motor Oil Range Organics (MRO) | ND | 47 | mg/Kg | 1 | 5/22/2017 12:00:34 PM | 31865 | | | | |
| Surr: DNOP | 99.4 | 70-130 | %Rec | 1 | 5/22/2017 12:00:34 PM | 31865 | | | | |
| EPA METHOD 8260B: VOLATILES S | HORT LIST | | | | Analyst | RAA | | | | |
| Benzene | ND | 0.017 | mg/Kg | 1 | 5/22/2017 1:32:54 PM | SL42963 | | | | |
| Toluene | ND | 0.033 | mg/Kg | 1 | 5/22/2017 1:32:54 PM | SL42963 | | | | |
| Ethylbenzene | ND | 0.033 | mg/Kg | 1 | 5/22/2017 1:32:54 PM | SL42963 | | | | |
| Xylenes, Total | ND | 0.066 | mg/Kg | 1 | 5/22/2017 1:32:54 PM | SL42963 | | | | |
| | | | | | | | | | | |

70-130

70-130

70-130

70-130

%Rec

%Rec

%Rec

%Rec

1

1

5/22/2017 1:32:54 PM

5/22/2017 1:32:54 PM SL42963

1 5/22/2017 1:32:54 PM

1 5/22/2017 1:32:54 PM

SL42963

SL42963

SL42963

109

104

118

107

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

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

Lab Order 1705B26

Date Reported: 5/23/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: ZONE 3 Project: MUDGE LS 6 Collection Date: 5/19/2017 1:19:00 PM Lab ID: 1705B26-003 Matrix: SOIL Received Date: 5/20/2017 11:15:00 AM

| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch |
|----------------------------------|----------|--------|-----------|----|-----------------------|---------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | 49 | 30 | mg/Kg | 20 | 5/22/2017 12:48:06 PM | 31886 |
| EPA METHOD 8015D MOD: GASOLINE | RANGE | | | | Analyst | RAA |
| Gasoline Range Organics (GRO) | ND | 3.3 | mg/Kg | 1 | 5/22/2017 2:01:47 PM | R42963 |
| Surr: BFB | 94.9 | 70-130 | %Rec | 1 | 5/22/2017 2:01:47 PM | R42963 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANICS | | | | Analyst | том |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 5/22/2017 12:23:05 PM | 31865 |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 5/22/2017 12:23:05 PM | 31865 |
| Surr: DNOP | 101 | 70-130 | %Rec | 1 | 5/22/2017 12:23:05 PM | 31865 |
| EPA METHOD 8260B: VOLATILES SHO | RT LIST | | | | Analyst: | RAA |
| Benzene | ND | 0.016 | mg/Kg | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Toluene | ND | 0.033 | mg/Kg | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Ethylbenzene | ND | 0.033 | mg/Kg | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Xylenes, Total | ND | 0.066 | mg/Kg | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 70-130 | %Rec | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Surr: 4-Bromofluorobenzene | 106 | 70-130 | %Rec | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Surr: Dibromofluoromethane | 113 | 70-130 | %Rec | 1 | 5/22/2017 2:01:47 PM | SL42963 |
| Surr: Toluene-d8 | 108 | 70-130 | %Rec | 1 | 5/22/2017 2:01:47 PM | SL42963 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 3 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

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

Lab Order 1705B26

Date Reported: 5/23/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: MUDGE LS 6

Lab ID: 1705B26-004

Client Sample ID: ZONE 4 Collection Date: 5/19/2017 1:23:00 PM Received Date: 5/20/2017 11:15:00 AM

| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch |
|--------------------------------|--------------|--------|-----------|----|-----------------------|---------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | 46 | 30 | mg/Kg | 20 | 5/22/2017 1:00:30 PM | 31886 |
| EPA METHOD 8015D MOD: GASOLIN | IE RANGE | | | | Analyst | RAA |
| Gasoline Range Organics (GRO) | ND | 3.4 | mg/Kg | 1 | 5/22/2017 2:30:43 PM | R42963 |
| Surr: BFB | 96.7 | 70-130 | %Rec | 1 | 5/22/2017 2:30:43 PM | R42963 |
| EPA METHOD 8015M/D: DIESEL RAN | IGE ORGANICS | | | | Analyst | TOM |
| Diesel Range Organics (DRO) | ND | 9.9 | mg/Kg | 1 | 5/22/2017 12:45:16 PM | 31865 |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 5/22/2017 12:45:16 PM | 31865 |
| Surr: DNOP | 101 | 70-130 | %Rec | 1 | 5/22/2017 12:45:16 PM | 31865 |
| EPA METHOD 8260B: VOLATILES SH | IORT LIST | | | | Analyst | RAA |
| Benzene | ND | 0.017 | mg/Kg | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Toluene | ND | 0.034 | mg/Kg | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Ethylbenzene | ND | 0.034 | mg/Kg | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Xylenes, Total | ND | 0.069 | mg/Kg | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 70-130 | %Rec | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | %Rec | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Surr: Dibromofluoromethane | 114 | 70-130 | %Rec | 1 | 5/22/2017 2:30:43 PM | SL42963 |
| Surr: Toluene-d8 | 108 | 70-130 | %Rec | 1 | 5/22/2017 2:30:43 PM | SL42963 |

Matrix: SOIL

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

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID MB-31886 | SampType: MBLK | TestCode: EPA Method | 300.0: Anions | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 31886 | RunNo: 42957 | | |
| Prep Date: 5/22/2017 | Analysis Date: 5/22/2017 | SeqNo: 1352553 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-31886 | SampType: LCS | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-31886 Client ID: LCSS | SampType: LCS Batch ID: 31886 | TestCode: EPA Method RunNo: 42957 | 300.0: Anions | |
| | 1 31 | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 31886 Analysis Date: 5/22/2017 | RunNo: 42957 | | RPDLimit 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
- R RPD outside accepted recovery limits
- 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 5 of 8

WO#: 1705B26 23-May-17

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID LCS-31865 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
|--|----------------------|-----------------------|-----------|-------------|-----------|-----------|---------------------------------|------------|------------|------|
| Client ID: LCSS | Batch | ID: 31 | 865 | F | RunNo: 4 | 2945 | | | | |
| Prep Date: 5/22/2017 | Analysis D | ate: 5/ | 22/2017 | S | SeqNo: 1 | 351371 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 10 | 50.00 | 0 | 91.5 | 73.2 | 114 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 96.8 | 70 | 130 | | | |
| Sample ID MB-31865 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Die | esel Range | organics | |
| | | | | | | | | - | 0 | |
| Client ID: PBS | Batch | ID: 31 | 865 | R | unNo: 4 | 2945 | | | 5 | |
| Client ID: PBS Prep Date: 5/22/2017 | Batch Analysis D | | | | tunNo: 4 | | Units: mg/K | g | 5 | |
| | | | 22/2017 | | | | Units: mg/K HighLimit | g %RPD | RPDLimit | Qual |
| Prep Date: 5/22/2017 | Analysis D | ate: 5/ | 22/2017 | S | SeqNo: 1 | 351372 | 0 | 0 | Ū | Qual |
| Prep Date: 5/22/2017 Analyte | Analysis D Result | ate: 5/ PQL | 22/2017 | S | SeqNo: 1 | 351372 | 0 | 0 | Ū | Qual |

Qualifiers:

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

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23-May-17

WO#: 1705B26

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID 100ng lcs2 | Samp | Type: LC | s | Tes | tCode: El | PA Method | 8260B: Volat | tiles Short | List | |
|--|--|--|--|-------------|--|---|---|-------------|-------------------------|------|
| Client ID: LCSS | Batc | h ID: SL | .42963 | F | RunNo: 4 | 2963 | | | | |
| Prep Date: | Analysis [| Date: 5/ | 22/2017 | 5 | SeqNo: 1 | 351926 | Units: mg/K | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.2 | 0.025 | 1.000 | 0 | 119 | 70 | 130 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 103 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.50 | | 0.5000 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.54 | | 0.5000 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.52 | | 0.5000 | | 103 | 70 | 130 | | | |
| | | | 0 5000 | | 00 5 | 70 | 400 | | | |
| Surr: Toluene-d8 | 0.47 | | 0.5000 | | 93.5 | 70 | 130 | | | |
| Surr: Toluene-d8 Sample ID rb | | Гуре: МЕ | | Tes | | | 8260B: Volat | iles Short | List | |
| | Samp | Type: ME | BLK | | | PA Method | | iles Short | List | |
| Sample ID rb | Samp | h ID: SL | 3LK 42963 | R | tCode: El | PA Method 2963 | | | List | |
| Sample ID rb Client ID: PBS | Samp ⁻¹ Batcl | h ID: SL | 3LK 42963 22/2017 | R | tCode: El | PA Method 2963 | 8260B: Volat | | List RPDLimit | Qual |
| Sample ID rb Client ID: PBS Prep Date: | SampT Batcl Analysis D | h ID: SL Date: 5/ | 3LK 42963 22/2017 | R | tCode: El RunNo: 42 SeqNo: 13 | PA Method 2963 351933 | 8260B: Volat Units: mg/K | g | | Qual |
| Sample ID rb Client ID: PBS Prep Date: Analyte | Samp Batcl Analysis D Result | h ID: SL Date: 5/ PQL | 3LK 42963 22/2017 | R | tCode: El RunNo: 42 SeqNo: 13 | PA Method 2963 351933 | 8260B: Volat Units: mg/K | g | | Qual |
| Sample ID rb Client ID: PBS Prep Date: Analyte Benzene | Samp Batcl Analysis D Result ND | h ID: SL Date: 5/ PQL 0.025 | 3LK 42963 22/2017 | R | tCode: El RunNo: 42 SeqNo: 13 | PA Method 2963 351933 | 8260B: Volat Units: mg/K | g | | Qual |
| Sample ID rb Client ID: PBS Prep Date: Analyte Benzene Toluene | Samp [¬] Batcl Analysis E Result ND ND | h ID: SL Date: 5/ PQL 0.025 0.050 | 3LK 42963 22/2017 | R | tCode: El RunNo: 42 SeqNo: 13 | PA Method 2963 351933 | 8260B: Volat Units: mg/K | g | | Qual |
| Sample ID rb Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene | Samp Batcl Analysis I Result ND ND ND | h ID: SL Date: 5/ PQL 0.025 0.050 0.050 | 3LK 42963 22/2017 | R | tCode: El RunNo: 42 SeqNo: 13 | PA Method 2963 351933 | 8260B: Volat Units: mg/K | g | | Qual |
| Sample ID rb Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total | Samp Batcl Analysis D Result ND ND ND ND | h ID: SL Date: 5/ PQL 0.025 0.050 0.050 | 3LK 42963 22/2017 SPK value | R | tCode: El RunNo: 4/ SeqNo: 1: %REC | PA Method 2963 351933 LowLimit | 8260B: Volat Units: mg/K HighLimit | g | | Qual |
| Sample ID rb Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4 | Samp ^T Batcl Analysis E Result ND ND ND ND 0.53 | h ID: SL Date: 5/ PQL 0.025 0.050 0.050 | 3LK 42963 22/2017 SPK value 0.5000 | R | tCode: El RunNo: 4: SeqNo: 1: %REC 106 | 2963 2963 351933 LowLimit | 8260B: Volat Units: mg/K HighLimit 130 | g | | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- 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
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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23-May-17

WO#: 1705B26

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID rb | Samp | ype: MI | BLK | Tes | tCode: E | PA Method | 8015D Mod: | Gasoline | Range | |
|--|------------|------------------|----------------|-------------|---------------------|-----------|-------------|----------|----------|------|
| Client ID: PBS | Batcl | Batch ID: R42963 | | | RunNo: 42963 | | | | | |
| Prep Date: | Analysis D | Date: 5/ | 22/2017 | S | SeqNo: 1 | 351944 | Units: mg/M | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 500 | | 500.0 | | 99.5 | 70 | 130 | | | |
| | | | | | | | | | | |
| Sample ID 2.5ug gro Ics | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015D Mod: | Gasoline | Range | |
| Client ID: LCSS | Batch | n ID: R4 | 2963 | F | RunNo: 4 | 2963 | | | | |
| Prep Date: | Analysis D | ate: 5/ | 22/2017 | S | SeqNo: 1 | 352515 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | | | | | | | | | | |
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 98.2 | 70 | 130 | | | |
| Gasoline Range Organics (GRO) Surr: BFB | 25 500 | 5.0 | 25.00 500.0 | 0 | 98.2 100 | 70 70 | 130 130 | | | |

Qualifiers:

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

Page 8 of 8

WO#: 1705B26

23-May-17

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental A Albu TEL: 505-345-3975 Website: www.hal | 4901 Haw querque, NI FAX: 505-3- | vkins NE 14 87109 45-4107 | Sam | nple Log-In Check List |
|---|---|--|---------------------------------|--------|---|
| Client Name: BLAGG | Work Order Number: | 1705B26 | | | RcptNo: 1 |
| . * | | | | | |
| Received By: Anne Thome | 5/20/2017 11:15:00 AM | L. | a | me An | |
| Completed By: Anne Thome | 5/22/2017 7:48:33 AM | | 0 | me Han | |
| Reviewed By: | 5122117 | | 54 | | |
| 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 | | | |
| Log In | | | | | ÷ |
| 4. Was an attempt made to cool the samples? | , | Yes 🗹 | | No 🗆 | |
| | | | | | |
| 5. Were all samples received at a temperature | of >0° C to 6.0°C | Yes 🗹 | 1 | No 🗌 | NA 🗌 |
| 6. Sample(s) in proper container(s)? | | Yes V | | No 🗆 | |
| | | | | | |
| 7. Sufficient sample volume for indicated test(s | 3)? | Yes 🗹 | | No 🗆 | |
| 8. Are samples (except VOA and ONG) proper | ly preserved? | Yes 🗹 | I | No 🗌 | |
| 9. Was preservative added to bottles? | | Yes 🗌 | I | No 🗹 | NA 🗆 |
| 10.VOA vials have zero headspace? | | Yes | | No 🗌 | No VOA Vials 🗹 |
| 11. Were any sample containers received broke | en? | Yes | | No 🗹 | # = = = = = = = = = = = = = = = = = = = |
| | | _ | | _ | # of preserved bottles checked |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes 🖌 | 1 | No | for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of | Custody? | Yes 🗹 | 1 | No 🗌 | Adjusted? |
| 14. Is it clear what analyses were requested? | | Yes 🗹 | 1 | No 🗌 | |
| 15. Were all holding times able to be met? (if no, notify customer for authorization.) | | Yes 🗹 | r | No 🗌 | Checked by: |
| Special Handling (if applicable) | | | | | |

| 16. V | Vas client notified of all | discrepancies with this order? | | Yes | | No 🗆 | NA 🗹 |
|-------|----------------------------|---|----------------------------|-----------|----------------------------------|--------|---|
| | Person Notified: | | Date | | CARDIN COLONIA COLONIA | | |
| | By Whom: | A CONTRACTOR OF | Via: [| eMail | | housed | In Person |
| | Regarding: | | Anter (Calls State States) | 040600000 | entertadowi 6.0 kg antibio danim | | AN CHILL CLICK & CONTRACTOR AND CONTRACTOR |
| | Client Instructions: | | | | | | NARON LANGS AND |

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.2 | Good | Yes | | | |

Page 1 of 1

| С | Client: BP AMERICA | | | | Around | Time: | | SAME | | | | | | | | | | | | | | NT | | |
|--|----------------------------------|------------|--|------------------------------|------------------|-------------|-----------------------|---|-----------------------|--------------|------------------------------|-----------------------------|--------------------|--------------------|---------------------------|---------------|---|------------------------------|-----------------------|-----------------------|----------|---------------|-----|----------------------|
| Client: . | BP A | MERICA | | | andard | | Rush | | | | | | | | | | | | | | | | | _ |
| - | BIAL | Entel | VEERING INC. | Projec | ct Name | | | ALL | | | | | | | | | ronn | | | | | | | |
| Mailing | Address: | - NON | | | MUDE | EL | 56 | , | | | 400 | | | | | | | | | M 87 | 100 | | | |
| Barris and Street St | | | | Projec | ct #: | | | | | | | | awki 5-34 | | | | • | | | 4107 | | | | |
| Phone | + (5n | 5) 37 | 0-1183 | 1 | | | | | | | Te | n. 50 | 0-34 | 0-38 | | | sis l | and the second second | and the second second | and the second second | | | | |
| email or | | 5) 50 | | Proje | ct Mana | ger: | and the second second | | | | 2 | ô | | | | | | | | | | T | | |
| and the second s | Package: | | nan kanan ana ana ana ana ana ana ana an | 7 | J. B | - | | | | 021 | s on | MR | | | 1 | | s, | B's | | | | | | |
| X Stan | | | Level 4 (Full Validation) | | | | | | | S (8 | Ga | 202 | | | SIMIS | | DO. | PO | | | | | | |
| Accredi | | | | | oler: J | | | | | TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | = | F | PAH's (8310 or 8270 SIMS) | | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PCB's | | | • | | | 2 |
| | Contraction of the second second | □ Othe | Pr | | e: 🜔 | | | | Anter a second second | H | + | SRO | TPH (Method 418.1) | EDB (Method 504.1) | r 82 | s | 03 | SS / 1 | | (YO | | | | Air Bubbles (Y or N) |
| | (Type)_ | <u> </u> | 1 | and the second second second | ie Tem (22/(1 | eratur İ | e. | 2 | | HT BE | TBE | 8 | por | pou | 100 | leta | U, | icide | (Y) | -i- | N | | | S (Y |
| Date | Time | Matrix | Sample Request ID | Con | itainer | Prese | rvative | | | + | 4 | 3015 | Met | Met | (83 | 8 N | S (F | Pest | S | (Sen | OND | | | bble |
| Date | Time | WIGUIA | Sample Request ID | | and # | T | pe | | AN | BTEX | EX | H | H | DB | AH'S | RCRA 8 Metals | nion | 981 | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | r Bu |
| 5/01 | 1700 | 1 | 2 1 | | HKib | | | | | | m | FX | F | ш | 0 | R | 4 | 8 | <u>80</u> | 80 | - | + | | A |
| 5/19/2017 | | SOIL | ZONE 1 | 40 | 2 X 1 | 0 | OL | | 701 | X | | ~ | | _ | _ | | | | | | X | \rightarrow | _ | |
| | 1315 | | ZONE Z | | | | | | 202 | | | | | | | | | | | | | | | |
| _ | 1319 | | ZONE 3 | | | | | | -003 | | | | | | | | | | | | 4 | | _ | |
| | 1323 | J | ZONE 4 | | 1 | | | | -204 | 1 | | 1 | | | | | | | | | 1 | | | • |
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| | | | | | / | h | | h | | | | | | | | | | | | | | | | |
| Date: | Time: | Relinquish | II Black | Receiv | ved by. | ,/ | (| h ns/ | Time | Ren | nark | | SILL | | | 10.1 | | | er: | ST | EVE | Ma | ska | 1 |
| 2017 | 1650 | N | PL = r/ | Dent | 0 | 10 m | | L. | 115 | | 12 | | 110: | | - | | | | 0.0 | - | | 17.1 | - | |
| Date: | Time: | Relinduish | led by: | Receiv | ved by: | | | Date | Time | 1 | NPS | E | LEM | ENT | \$ | L | 1- C | 101 | SW | 1-E | MU | IDGL | -EL | 56 |
| | | | | | | | | | | | | | | | | | | | | | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

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May 25, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1705C34

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/24/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical Report | |
|-------------------|--|
| Lab Order 1705C34 | |

Date Reported: 5/25/2017

5 5/24/2017 11:46:13 AM 31921

5/24/2017 11:46:13 AM 31921
 5/24/2017 11:46:13 AM 31921

5 5/24/2017 11:46:13 AM 31921

Hall Environmental Analysis Laboratory, Inc.

-

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

| CLIENT: Blagg Engineering | | | Client Samp | | | |
|----------------------------------|---------|--------|-------------|-----------|-----------------------|-------|
| Project: MUDGE LS 6 | | | | | 3/2017 10:25:00 AM | |
| Lab ID: 1705C34-001 | Matrix: | SOIL | Received | Date: 5/2 | 4/2017 7:15:00 AM | |
| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
| EPA METHOD 300.0: ANIONS | , | | | | Analyst: | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 12:01:05 PM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | s | | | Analyst: | TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 5/24/2017 8:59:23 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/24/2017 8:59:23 AM | 31930 |
| Surr: DNOP | 86.9 | 70-130 | %Rec | 1 | 5/24/2017 8:59:23 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 18 | mg/Kg | 5 | 5/24/2017 11:46:13 AM | 31921 |
| Surr: BFB | 110 | 54-150 | %Rec | 5 | 5/24/2017 11:46:13 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.091 | mg/Kg | 5 | 5/24/2017 11:46:13 AM | 31921 |

0.18

0.18

0.36

66.6-132

mg/Kg

mg/Kg

mg/Kg

%Rec

ND

ND

ND

123

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 6 |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

| Ana | lytical | Report |
|-----|---------|--------|
|-----|---------|--------|

Lab Order 1705C34

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering | | 0 | Client Samp | le ID: ZC | ONE 6 | | | | |
|--------------------------------|------------|----------|--|-----------|-----------------------|-------|--|--|--|
| Project: MUDGE LS 6 | | | Collection Date: 5/23/2017 10:34:00 AM | | | | | | |
| Lab ID: 1705C34-002 | Matrix: | SOIL | Received Date: 5/24/2017 7:15:00 AM | | | | | | |
| Analyses | Result | PQL Qual | Units | DF | Date Analyzed | Batch | | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT | | | |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 12:38:20 PM | 31936 | | | |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | S | | | Analyst | TOM | | | |
| Diesel Range Organics (DRO) | ND | 9.9 | mg/Kg | 1 | 5/24/2017 9:27:07 AM | 31930 | | | |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 5/24/2017 9:27:07 AM | 31930 | | | |
| Surr: DNOP | 85.1 | 70-130 | %Rec | 1 | 5/24/2017 9:27:07 AM | 31930 | | | |
| EPA METHOD 8015D: GASOLINE RAI | NGE | | | | Analyst: | NSB | | | |
| Gasoline Range Organics (GRO) | ND | 3.7 | mg/Kg | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |
| Surr: BFB | 99.3 | 54-150 | %Rec | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB | | | |
| Benzene | ND | 0.018 | mg/Kg | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |
| Toluene | ND | 0.037 | mg/Kg | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |
| Ethylbenzene | ND | 0.037 | mg/Kg | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |
| Xylenes, Total | ND | 0.074 | mg/Kg | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |
| Surr: 4-Bromofluorobenzene | 116 | 66.6-132 | %Rec | 1 | 5/24/2017 12:10:16 PM | 31921 | | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 2 of 6 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering Project: MUDGE LS 6

| Sample ID MB-31936 | SampType: MBLK | TestCode: EPA Method | | |
|--|--|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 31936 | RunNo: 43028 | | |
| Prep Date: 5/24/2017 | Analysis Date: 5/24/2017 | SeqNo: 1355112 | Units: mg/Kg | x |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-31936 | SampType: LCS | TestCode: EPA Method | 300.0: Anions | |
| | | TestCode: EPA Method RunNo: 43028 | 300.0: Anions | |
| Sample ID LCS-31936 | SampType: LCS | | 300.0: Anions Units: mg/Kg | |
| Sample ID LCS-31936 Client ID: LCSS | SampType: LCS Batch ID: 31936 Analysis Date: 5/24/2017 | RunNo: 43028 | | RPDLimit 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
- R RPD outside accepted recovery limits
- 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 3 of 6

WO#: 1705C34 25-May-17

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID LCS-31930 | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | | |
|---|---|---------------------------|----------------|---|-----------------------------|----------------|-----------------------------|------------|------------------------|------|
| Client ID: LCSS Batch ID: 31930 | | | | F | RunNo: 43020 | | | | | |
| Prep Date: 5/24/2017 | ep Date: 5/24/2017 Analysis Date: 5/24/2017 | | | S | SeqNo: 1353919 Units: mg/Kg | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 42 | 10 | 50.00 | 0 | 84.2 | 73.2 | 114 | - | | |
| Surr: DNOP | 4.5 | | 5.000 | | 89.2 | 70 | 130 | | | |
| Sample ID MB-31930 SampType: MBLK | | | | the second se | | | | | | |
| Sample ID MB-31930 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Die | esel Range | e Organics | |
| Sample ID MB-31930 Client ID: PBS | | ype: ME | | | tCode: El RunNo: 4 | | 8015M/D: Die | esel Range | e Organics | |
| | | ID: 31 | | R | | 3020 | 8015M/D: Die Units: mg/K | - | e Organics | |
| Client ID: PBS | Batch | ID: 31 | 930 24/2017 | R | RunNo: 4 | 3020 | | - | e Organics RPDLimit | Qual |
| Client ID: PBS Prep Date: 5/24/2017 Analyte | Batch Analysis Da | ID: 319 ate: 5/ | 930 24/2017 | F | RunNo: 4 SeqNo: 1 | 3020 353920 | Units: mg/K | íg | | Qual |
| Client ID: PBS Prep Date: 5/24/2017 | Batch Analysis Da Result | ID: 31: ate: 5/ PQL | 930 24/2017 | F | RunNo: 4 SeqNo: 1 | 3020 353920 | Units: mg/K | íg | | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- 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
- P Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

25-May-17

WO#: 1705C34

Page 4 of 6

| Hall | Environmental | Analysis | Laboratory. | Inc. |
|------|---------------|----------|-------------|------|
| | | | | |

Client: **Blagg** Engineering **Project:** MUDGE LS 6

| | | | | the second s | | | | | | |
|-------------------------------|--------------------------|--|-----------------------|--|--|--|--|--|--|--|
| Sample ID MB-31921 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
| Client ID: PBS | Batch ID: 31921 | RunNo: 43026 | | | | | | | | |
| Prep Date: 5/23/2017 | Analysis Date: 5/24/2017 | SeqNo: 1354470 | Units: mg/Kg | | | | | | | |
| Analyte | Result PQL SPK valu | e SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual | | | | | | |
| Gasoline Range Organics (GRO) | ND 5.0 | | | | | | | | | |
| Surr: BFB | 980 100 | 97.8 54 | 150 | | | | | | | |
| Sample ID LCS-31921 | SampType: LCS | TestCode: EPA Method | 8015D: Gasoline Range |) | | | | | | |
| Client ID: LCSS | Batch ID: 31921 | RunNo: 43026 | | | | | | | | |
| Prep Date: 5/23/2017 | Analysis Date: 5/24/2017 | SeqNo: 1354471 | Units: mg/Kg | | | | | | | |
| Analyte | Result PQL SPK valu | e SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual | | | | | | |
| Gasoline Range Organics (GRO) | 23 5.0 25.0 | 0 0 93.8 76.4 | 125 | | | | | | | |
| Surr: BFB | 1100 100 | 0 106 54 | 150 | | | | | | | |
| Sample ID RB | SampType: MBLK | TestCode: EPA Method | 8015D: Gasoline Range | | | | | | | |
| Client ID: PBS | Batch ID: G43026 | RunNo: 43026 | | | | | | | | |
| Prep Date: | Analysis Date: 5/24/2017 | SeqNo: 1354482 | Units: %Rec | | | | | | | |
| Analyte | Result PQL SPK valu | e SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual | | | | | | |
| Surr: BFB | 990 100 | 99.1 54 | 150 | | | | | | | |
| Sample ID 2.5UG GRO LCS | SampType: LCS | TestCode: EPA Method | 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSS | Batch ID: G43026 | RunNo: 43026 | | | | | | | | |
| Prep Date: | Analysis Date: 5/24/2017 | SeqNo: 1354483 | Units: %Rec | | | | | | | |
| Analyte | Result PQL SPK valu | e SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual | | | | | | |
| Surr: BFB | 1100 100 |) 112 54 | 150 | | | | | | | |

Qualifiers:

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

Page 5 of 6

25-May-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering

Project: MUDGE LS 6

| - | | | | | | | | | | | | |
|----------------------------|-------------|-----------------|-----------|---------------------------------------|-----------|-----------|--------------|-------|----------|------|--|--|
| Sample ID MB-31921 | SampT | ype: ME | BLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
| Client ID: PBS | 921 | RunNo: 43026 | | | | | | | | | | |
| Prep Date: 5/23/2017 | Analysis Da | ate: 5/ | 24/2017 | 5 | SeqNo: 1 | 354496 | 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: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 117 | 66.6 | 132 | | | | | |
| Sample ID LCS-31921 | SampTy | ype: LC | S | Tes | tCode: E | PA Method | 8021B: Volat | tiles | | | | |
| Client ID: LCSS | Batch | ID: 319 | 921 | F | RunNo: 4 | 3026 | | | | | | |
| Prep Date: 5/23/2017 | Analysis Da | ate: 5/2 | 24/2017 | S | SeqNo: 1 | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 100 | 80 | 120 | | | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 103 | 80 | 120 | | | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 104 | 80 | 120 | | | | | |
| Xylenes, Total | 3.2 | 0.10 | 3.000 | 0 | 106 | 80 | 120 | | | | | |
| Surr: 4-Bromofluorobenzene | 1.3 | | 1.000 | | 127 | 66.6 | 132 | | | | | |
| Sample ID RB | SampTy | pe: MB | LK | Test | tCode: El | PA Method | 8021B: Volat | iles | | | | |
| Client ID: PBS | Batch | ID: 84 | 3026 | R | RunNo: 4 | 3026 | | | | | | |
| Prep Date: | Analysis Da | ate: 5/2 | 24/2017 | S | SeqNo: 1 | 354508 | Units: %Red | ; | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 115 | 66.6 | 132 | | | | | |
| Sample ID 100NG BTEX LCS | SampTy | pe: LC | S | Test | Code: El | PA Method | 8021B: Volat | iles | | | | |
| Client ID: LCSS | Batch | ID: B4 3 | 3026 | R | unNo: 4 | 3026 | | | | | | |
| Prep Date: | Analysis Da | ate: 5/2 | 24/2017 | S | eqNo: 1 | 354509 | Units: %Rec | ; | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 116 | 66.6 | 132 | | | | | |
| | | | | | | | | | | | | |

Qualifiers:

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

Page 6 of 6

WO#: 1705C34

25-May-17

| ANAL | CONMENTAL YSIS RATORY | TEL: 505-345-3975 | 4901 Hawkins NE querque, NM 87109 | Sam | Sample Log-In Check List | | | | | | | | | |
|--|--|---|--------------------------------------|----------------------|--------------------------------|-------------------|--|--|--|--|--|--|--|--|
| Client Name: BLAGG | | Work Order Number: | 1705C34 | | RcptNo: | 1 | | | | | | | | |
| Received By: Completed By: Reviewed By: | Anne Thome Anne Thome ATS | 5/24/2017 7:15:00 AM 5/24/2017 7:52:07 AM 5 (24 (17 | | Arre Il- | | | | | | | | | | |
| Is Chain of C How was the | tody Is intact on sample bottles? Sustody complete? Is sample delivered? | | Yes □ Yes ☑ Courier | No 🗌 No 🗍 | Not Present 🗹 Not,Present 🗌 | | | | | | | | | |
| Log In 4. Was an atte | mpt made to cool the samples | ? | Yes 🗹 | No 🗌 | NA 🗌 | | | | | | | | | |
| | nples received at a temperatur | e of >0° C to 6.0°C | Yes 🗹 | No 🗌 | NA 🗌 | | | | | | | | | |
| 7. Sufficient sar 8. Are samples | nproper container(s)? nple volume for indicated test((except VOA and ONG) prope ative added to bottles? | | Yes ✔ Yes ✔ Yes ✔ Yes □ | No 🗌 No 🗍 No 💭 | NA 🗌 | | | | | | | | | |
| | ve zero headspace? mple containers received brok | en? | Yes | No □ No ☑ | No VOA Vials | | | | | | | | | |
| (Note discrep | ork match bottle labels? pancies on chain of custody) | | Yes 🗹 | | bottles checked for pH: | >12 unless noted) | | | | | | | | |
| 14. Is it clear what 15. Were all hold | correctly identified on Chain or at analyses were requested? ing times able to be met? customer for authorization.) | r Custody? | Yes ✔ Yes ✔ Yes ✔ | No 🗌 No 🗍 No 🗍 | Checked by: | | | | | | | | | |
| Special Handl | ing (if applicable) | | | | _ | | | | | | | | | |
| | tified of all discrepancies with | abbiosensulations | Yes 🗌 | No 🗌 | NA 🗹 | | | | | | | | | |
| By Who Regard | 2. | Date Via: |] eMail 🔲 Phon | ne 🗌 Fax | In Person | | | | | | | | | |

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.3 | Good | Yes | | | |

Page 1 of 1

| Client: BP America | | | Turn-Around | Rush | SAME DAK | | | | | | | | | | | | | NT | | r | |
|-------------------------|--------------------------------|------------|---|--------------|----------------------|---|----------------------------|------------------------------|-----------------------------|--------------------|--------------------|----------------|---------------|---|------------------------|-------------|-----------------|----------|------------|------------|----------------|
| Б | Address | ENGINE | ERNG INC. | Project Name | LS 6 | | | 490 | 01 H | ہ awkii | | | envi Albi | | | | | 109 | | | |
| Phone # | : (50 | 5 370 | - 1(83 | Project #: | | | | | | 5-34 | | 975 | | ax 8 | 505- | 345- | 410 | | | 42 | |
| email or | Fax#: Package: | | Level 4 (Full Validation) | Project Mana | ger: BuAlab | | (8021) | Gas only) | O / MRO) | | | SIMS) | | - | PCB's | | | | | | |
| Accredit | tation | | r | Sampler: | XXes | © Notation | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | od 418.1) | od 504.1) | 8270 | etals | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 | (A) | - (AOV-i | E | | | s (Y or N) |
| Date | Time | Matrix | Sample Request ID | Type and # | Preservative Type | HEADNO MA | BTEX + M | BTEX + M | _ | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or | RCRA 8 Metals | Anions (F,(| 8081 Pesti | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | Air Bubbles (Y |
| 3/17 | 1025 | Soll | ZONE 5 | 40221 | COOL U | 105- | X | | XX | | | _ | | | | | | X X | | •. | + |
| | | | ZONE Q | | | -702 | | | | | | | | | | | | | | | |
| | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | | | | | | | | | + |
| Date: 23/(7 Date: | Time: 1520 Time: 1910 | Relinquish | (Blogg | Received by: | Jalle - | Date Time 5/2/17 1520 Date Time 05/24/17 0715 | Rer | l nark BS | s: B V | ID: EME | BP VH | ixo L | NEV | Cen RM DO | *a@ (18) | M-1 | 6: | Fere | GLE GLE | ista LS | 6 |

.



May 26, 2017 Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

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

OrderNo.: 1705C81

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/25/2017 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,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical Report | |
|--------------------------|--|
| Lab Order 1705C81 | |

Date Reported: 5/26/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering Project: MUDGE LS 6 | | | Client Sampl Collection | | ne 7 24/2017 1:42:00 PM | |
|--|--------------|----------|----------------------------|-----------|----------------------------|--------|
| Lab ID: 1705C81-001 | Matrix: | SOIL | Received | Date: 5/2 | .5/2017 7:10:00 AM | |
| Analyses | Result | PQL Qua | l Units | DF | Date Analyzed | Batch |
| EPA METHOD 300.0: ANIONS | | | | | Analyst: | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 5/25/2017 12:02:40 PM | 31974 |
| EPA METHOD 8015M/D: DIESEL RAM | IGE ORGANICS | | | | Analyst: | TOM |
| Diesel Range Organics (DRO) | ND | 9.8 | mg/Kg | 1 | 5/25/2017 9:30:13 AM | 31956 |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 5/25/2017 9:30:13 AM | 31956 |
| Surr: DNOP | 87.1 | 70-130 | %Rec | 1 | 5/25/2017 9:30:13 AM | 31956 |
| EPA METHOD 8015D: GASOLINE RA | NGE | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.5 | mg/Kg | 1 | 5/25/2017 12:23:45 PM | G43065 |
| Surr: BFB | 108 | 54-150 | %Rec | 1 | 5/25/2017 12:23:45 PM | G43065 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.022 | mg/Kg | 1 | 5/25/2017 12:23:45 PM | B43065 |
| Toluene | ND | 0.045 | mg/Kg | 1 | 5/25/2017 12:23:45 PM | B43065 |
| Ethylbenzene | ND | 0.045 | mg/Kg | 1 | 5/25/2017 12:23:45 PM | B43065 |
| Xylenes, Total | ND | 0.089 | mg/Kg | 1 | 5/25/2017 12:23:45 PM | B43065 |
| Surr: 4-Bromofluorobenzene | 95.1 | 66.6-132 | %Rec | 1 | 5/25/2017 12:23:45 PM | B43065 |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 5 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-31974 | SampType: MBLK | TestCode: EPA Method 300.0: | Anions |
|--|---|--|-------------------------|
| Client ID: PBS | Batch ID: 31974 | RunNo: 43067 | |
| Prep Date: 5/25/2017 | Analysis Date: 5/25/2017 | SeqNo: 1355858 Units: | mg/Kg |
| Analyte | Result PQL SPK va | ue SPK Ref Val %REC LowLimit HighL | imit %RPD RPDLimit Qual |
| Chloride | ND 1.5 | | |
| | | and the second statement of th | |
| Sample ID LCS-31974 | SampType: LCS | TestCode: EPA Method 300.0: / | Anions |
| Sample ID LCS-31974 Client ID: LCSS | SampType: LCS Batch ID: 31974 | TestCode: EPA Method 300.0: / RunNo: 43067 | Anions |
| • • • • • • • • • • • • • • | 1 21 | RunNo: 43067 | Anions mg/Kg |
| Client ID: LCSS | Batch ID: 31974 Analysis Date: 5/25/2017 | RunNo: 43067 | mg/Kg |

Qualifiers:

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

Page 2 of 5

26-May-17

WO#: 1705C81

WO#: 1705C81

26-May-17

| Client:Blagg HProject:MUDG | Engineering E LS 6 | | |
|--|--|---|------|
| Sample ID LCS-31943 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | |
| Client ID: LCSS | Batch ID: 31943 | RunNo: 43051 | |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354741 Units: %Rec | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Qual |
| Surr: DNOP | 4.8 5.000 | 95.2 70 130 | |
| Sample ID MB-31943 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | |
| Client ID: PBS | Batch ID: 31943 | RunNo: 43051 | |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354742 Units: %Rec | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Qual |
| Surr: DNOP | 9.6 10.00 | 96.1 70 130 | |
| Sample ID LCS-31956 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | |
| Client ID: LCSS | Batch ID: 31956 | RunNo: 43052 | |
| Prep Date: 5/25/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354925 Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 10 50.00 | 0 91.1 73.2 114 | |
| Surr: DNOP | 4.3 5.000 | 85.7 70 130 | |
| Sample ID MB-31956 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | |
| Client ID: PBS | Batch ID: 31956 | RunNo: 43052 | |
| Prep Date: 5/25/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354926 Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND 10 | | |
| Motor Oil Range Organics (MRO) Surr: DNOP | ND 50 8.1 10.00 | 81.3 70 130 | |
| Suit. Divor | 0.1 10.00 | | |
| Sample ID LCS-31932 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | |
| Client ID: LCSS | Batch ID: 31932 | RunNo: 43051 | |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1355829 Units: %Rec | |
| Analyte | And the second se | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Qual |
| Surr: DNOP | 4.5 5.000 | 89.3 70 130 | |
| Sample ID MB-31932 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | |
| Client ID: PBS | Batch ID: 31932 | RunNo: 43051 | |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1355830 Units: %Rec | |
| Analyte | the second state of the se | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Qual |
| Surr: DNOP | 9.4 10.00 | 94.4 70 130 | |

Qualifiers:

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

Page 3 of 5

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID RB | SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | | |
|--|---|---------------|-----------------|-------------|----------------------|----------------|----------------------------|------------|---------------|------|
| Client ID: PBS | Batch ID: G43065 RunNo: 43065 | | | | | | | | | |
| Prep Date: | Analysis D | ate: 5/ | 25/2017 | S | SeqNo: 1 | 355625 | Units: mg/h | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 920 | | 1000 | | 92.3 | 54 | 150 | | | |
| | | | | | | | | | | |
| Sample ID 2.5UG GRO LCS | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | 0 | |
| Sample ID 2.5UG GRO LCS Client ID: LCSS | | ype: LC | | | tCode: El | | 8015D: Gaso | oline Rang | 9 | |
| | | 1D: G4 | 3065 | R | | 3065 | 8015D: Gaso Units: mg/K | 0 | Ð | |
| Client ID: LCSS | Batch | 1D: G4 | 3065 25/2017 | R | RunNo: 4 | 3065 | | 0 | e RPDLimit | Qual |
| Client ID: LCSS Prep Date: | Batch Analysis D | ate: 5/ | 3065 25/2017 | R | RunNo: 4 SeqNo: 1 | 3065 355626 | Units: mg/M | íg | | Qual |

Qualifiers:

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

Page 4 of 5

26-May-17

WO#: 1705C81

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID RB | SampType: MBLK TestCode: EPA Method 802 | | | | | | | tiles | | | | |
|--|--|--|--|--------------------------------------|---|--|--|-------|----------|------|--|--|
| Client ID: PBS | Batch | h ID: B4 | 3065 | F | RunNo: 4 | 3065 | | | | | | |
| Prep Date: | Analysis D | Date: 5/ | 25/2017 | S | SeqNo: 1 | 355634 | Units: mg/Kg | | | | | |
| 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-Bromofluorobenzene | 0.91 | | 1.000 | | 90.7 | 66.6 | 132 | | | | | |
| | CLCS SampType: LCS TestCode: EPA Method 8021B: Volatiles | | | | | | | | | | | |
| Sample ID 100NG BTEX LCS | SampT | ype: LC | S | Test | tCode: El | PA Method | 8021B: Volat | tiles | | | | |
| Sample ID 100NG BTEX LCS Client ID: LCSS | | ype: LC | | | tCode: El | | 8021B: Volat | tiles | | | | |
| | | n ID: B4 | 3065 | R | | 3065 | 8021B: Volat | | | | | |
| Client ID: LCSS | Batch | n ID: B4 | 3065 25/2017 | R | aunNo: 4 | 3065 | | | RPDLimit | Qual | | |
| Client ID: LCSS Prep Date: | Batch Analysis D | n ID: B4 Date: 5 / | 3065 25/2017 | R | aunNo: 4 GeqNo: 1 | 3065 355635 | Units: mg/K | g | RPDLimit | Qual | | |
| Client ID: LCSS Prep Date: Analyte | Batch Analysis D Result | n ID: B4 Date: 5/ PQL | 3065 25/2017 SPK value | R S SPK Ref Val | RunNo: 4 SeqNo: 1 %REC | 3065 355635 LowLimit | Units: mg/K HighLimit | g | RPDLimit | Qual | | |
| Client ID: LCSS Prep Date: Analyte Benzene Toluene | Batch Analysis D Result 0.85 | n ID: B4 Date: 5/ PQL 0.025 | 3065 25/2017 SPK value 1.000 | R SPK Ref Val 0 | RunNo: 4 GeqNo: 1 %REC 85.3 | 3065 355635 LowLimit 80 | Units: mg/K HighLimit 120 | g | RPDLimit | Qual | | |
| Client ID: LCSS Prep Date: Analyte Benzene | Batch Analysis D Result 0.85 0.90 | PQL 0.025 0.050 | 3065 25/2017 SPK value 1.000 1.000 | R S SPK Ref Val 0 0 | RunNo: 4 SeqNo: 1 %REC 85.3 89.6 | 3065 355635 LowLimit 80 80 | Units: mg/K HighLimit 120 120 | g | RPDLimit | Qual | | |
| Client ID: LCSS Prep Date: Analyte Benzene Toluene Ethylbenzene | Batch Analysis D Result 0.85 0.90 0.92 | PQL 0.025 0.050 0.050 | 3065 25/2017 SPK value 1.000 1.000 1.000 | R S SPK Ref Val 0 0 0 | RunNo: 4 SeqNo: 1 <u>%REC</u> 85.3 89.6 92.0 | 3065 355635 LowLimit 80 80 80 | Units: mg/K HighLimit 120 120 120 | g | RPDLimit | 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
- R RPD outside accepted recovery limits
- 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

WO#: 1705C81 26-May-17

its Doc

Page 5 of 5

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental Albu Albu TEL: 505-345-3975 . Website: www.hal | 4901 Hawkins aquerque, NM 87 FAX: 505-345-4 | NE 7109 Sam | ple Log-In Check I | .ist |
|---|---|--|----------------|---|----------|
| Client Name: BLAGG | Work Order Number: | 1705C81 | | RcptNo: 1 | |
| Received By: Anne Thome | 5/25/2017 7:10:00 AM | | Anne Hrom | ~ | |
| Completed By: Anne Thome Reviewed By: | 5/25/2017 8:05:51 AM 5 25 17 | | anne Hann | | , • |
| 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 | | | |
| Log In | | | | | |
| 4. Was an attempt made to cool the sample | es? | Yes 🗹 | No 🗌 | | |
| 5. Were all samples received at a temperatu | are 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 | tt(s)? | Yes 🗹 | No 🗆 | | |
| 8. Are samples (except VOA and ONG) prop | perly 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? (Note discrepancies on chain of custody) | | Yes 🗹 | No 🗆 | for pH: (<2 or >12 unles | s noted) |
| 13. Are matrices correctly identified on Chain | of Custody? | 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) | | | | | |
| 16. Was client notified of all discrepancies with | h this order? | Yes | No 🗆 | NA 🗹 | |
| Person Notified: | Date | | | | |
| By Whom: | Via: | eMail P | hone 🗌 Fax | In Person | |
| Regarding: | | AND ADDRESS OF A DESCRIPTION OF | | | |
| Client Instructions: | n en nam de selecte de la constante de la const | | | 22-III DANI DANI DANI DANI DANI DANI DANI D | |
| 17. Additional remarks: | | | | | |
| 18. Cooler Information | | | | | |
| | Seal Intact Seal No Sea | eal Date | Signed By | | |

Page 1 of 1

| Client: | hain- | of-Cu merica | stody Record | Turn-Around | | SAME | | | | | | | | | | | | | | | | |
|--|------------------|-----------------|--|-------------------------|----------------------|--|------------------|------------------------------|------------------|------------------|--------------------|--------------------|---------------------------|---------------|---|------------------------------|-------------|-----------------|----------|-----|---------------|----------------------|
| | RIAL | End | Tio | Project Name | roject Name: | | | 5 | | | | | | | | | | | KA | | DR | T |
| Mailing | Address: | Engin | ery Ivc- | MUDO | SE LS | 6 | | | | | | | v.hal | | | | | | | | | |
| | | | | Project #: | | | | | | | awki | | | | | | | | | | | |
| | 100 | A 775 | 1107 | - | | | | | Te | el. 50 | 5-34 | 5-39 | al a resource | | | | 345- | | 7 | | | |
| Phone # | | 5) 54 |)- 1(93 | Destauthouse | | and the second | | | 2 | 2 | | | A | naly | | кеq | uest | | | | - | |
| email or | | | and a second | Project Manager: | | | | | luo | ARC | | | | | SO4 | S | | | | | | |
| Stan | Package: dard | | Level 4 (Full Validation) | STEVE MOSKAL | | | | | + TPH (Gas only) | DRO / MRO) | | | (SM | | 04, | PCB | | | | | | |
| Accredi | | | | Sampler: JEFF Bulle | | | | | H | DR | ~ | ~ | 0 SI | | 0 ₂ ,F | 082 | | | | | | |
| | AP | □ Othe | r | Onlice aspen | Xauss | ENO | t faile ture. | Ħ | H + | 20 | 18.1 | 04.1 | 827 | | 0 ₃ ,N | \$ / 8(| | (A) | 1 | | | N N |
| | (Type) | • | | Sample Tem | peratilitie | | | | BE | (G | 4 pd | od 5 | Dor | tals | I,NC | ides | (1 | 8 | Q | | | Z |
| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL 17050 | | BTEX + CINTBE + EMB's (8021) | BTEX + MTBE | TPH 8015B (GRO / | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | Air Bubbles (Y or N) |
| Sha/17 | 1342 | SOIL | ZONE 7 | 4 ozx1 | lax | 1.0-0 | 201 | X | _ | X | · | _ | _ | - | | | | | X | | - | + |
| | | -0,- | 2000 | 1.00 | | | | - | | | | | | | | | | | | -+ | + | + |
| · · · | | | - | | | | | | | | | - | | | | | | | | -+ | -+ | + |
| | | | | | | | | | | | | _ | | | | - | | - | | | + | - |
| | | | | | | | | | | | | | | | | - | | | | | + | + |
| | | | | | | | | | | | | | | | | | - | | | - | + | + |
| Madeministration | | | | | | | | | | | | | | | | | | | | _ | \rightarrow | _ |
| | | | | | | | A.r | | | | | | | | | <u> </u> | | • | | | | |
| Report of the local division of the local di | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| , | | | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Date: | Time: | Relinquish | 4 Blogg | Received by: | Walt | 5/24/17 | Time 1640 | Rer | nark | s: B | iD: | BP | 11×0 | NE | ver | 1 | the I | 7 | Stev | e N | NOSE | a/ |
| Date: | Time: | Relinquish | that | Received by: | mA | Date | Time 7 710 | ľ | دە | He | Mer | 1: | L | 1-0 | 01 | 81 | 1-6 | : # | nut | GE | ~>0 | |

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

June 05, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1706002

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/1/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

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

Lab Order 1706002

Date Reported: 6/5/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering Project: MUDGE LS 6 Lab ID: 1706002-001 | Client Sample ID: Zone 8Collection Date: 5/31/2017 3:20:00 PMMatrix: SOILReceived Date: 6/1/2017 7:20:00 AM | | | | | | | | |
|---|---|----------|------|-------|----|----------------------|--------|--|--|
| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch | | |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst | MRA | | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/1/2017 10:50:00 AM | 32061 | | |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | S | | | | Analyst | : TOM | | |
| Diesel Range Organics (DRO) | 29 | 9.8 | | mg/Kg | 1 | 6/1/2017 9:34:02 AM | 32055 | | |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 6/1/2017 9:34:02 AM | 32055 | | |
| Surr: DNOP | 87.4 | 70-130 | | %Rec | 1 | 6/1/2017 9:34:02 AM | 32055 | | |
| EPA METHOD 8015D: GASOLINE RAN | NGE | | | | | Analyst | RAA | | |
| Gasoline Range Organics (GRO) | 91 | 20 | | mg/Kg | 5 | 6/1/2017 11:05:23 AM | R43189 | | |
| Surr: BFB | 194 | 54-150 | S | %Rec | 5 | 6/1/2017 11:05:23 AM | R43189 | | |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst | RAA | | |
| Benzene | 0.10 | 0.10 | | mg/Kg | 5 | 6/1/2017 11:05:23 AM | B43189 | | |
| Toluene | ND | 0.20 | | mg/Kg | 5 | 6/1/2017 11:05:23 AM | B43189 | | |
| Ethylbenzene | 0.51 | 0.20 | | mg/Kg | 5 | 6/1/2017 11:05:23 AM | B43189 | | |
| Xylenes, Total | 6.1 | 0.40 | | mg/Kg | 5 | 6/1/2017 11:05:23 AM | B43189 | | |
| Surr: 4-Bromofluorobenzene | 118 | 66.6-132 | | %Rec | 5 | 6/1/2017 11:05:23 AM | B43189 | | |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 7 |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

| Hall Environmental Analys | sis Labora | tory, In | ıc. | | Lab Order 1706002 Date Reported: 6/5/2017 |
|--------------------------------|-------------|----------|--------|---------------|--|
| CLIENT: Blagg Engineering | | | Cli | ent Sar | nple ID: Grab #2 @ 22' |
| Project: MUDGE LS 6 | | | 0 | Collectio | on Date: 5/31/2017 3:23:00 PM |
| Lab ID: 1706002-003 | Matrix: | SOIL | | Receive | ed Date: 6/1/2017 7:20:00 AM |
| Analyses | Result | PQL | Qual 1 | U nits | DF Date Analyzed Batch |
| EPA METHOD 300.0: ANIONS | | | | | Analyst: MRA |
| Chloride | ND | 30 | | mg/Kg | 20 6/1/2017 11:14:50 AM 32061 |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANICS | 6 | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 200 | 9.6 | | mg/Kg | 1 6/1/2017 10:30:05 AM 32055 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 6/1/2017 10:30:05 AM 32055 |
| Surr: DNOP | 88.6 | 70-130 | | %Rec | 1 6/1/2017 10:30:05 AM 32055 |
| EPA METHOD 8015D: GASOLINE RAI | NGE | | | | Analyst: RAA |
| Gasoline Range Organics (GRO) | 380 | 66 | | mg/Kg | 20 6/1/2017 11:52:46 AM R43189 |
| Surr: BFB | 386 | 54-150 | S | %Rec | 20 6/1/2017 11:52:46 AM R43189 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: RAA |
| Benzene | 0.35 | 0.33 | | mg/Kg | 20 6/1/2017 11:52:46 AM B43189 |
| Toluene | ND | 0.66 | | mg/Kg | 20 6/1/2017 11:52:46 AM B43189 |
| Ethylbenzene | ND | 0.66 | | mg/Kg | 20 6/1/2017 11:52:46 AM B43189 |
| Xylenes, Total | 3.8 | 1.3 | | mg/Kg | 20 6/1/2017 11:52:46 AM B43189 |
| Surr: 4-Bromofluorobenzene | 127 | 66.6-132 | | %Rec | 20 6/1/2017 11:52:46 AM B43189 |

Analytical Report

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 3 of 7 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Client: Blagg Engineering **Project:** MUDGE LS 6

| | - | |
|--|--|--|
| Sample ID MB-32061 | SampType: mblk | TestCode: EPA Method 300.0: Anions |
| Client ID: PBS | Batch ID: 32061 | RunNo: 43191 |
| Prep Date: 6/1/2017 | Analysis Date: 6/1/2017 | SeqNo: 1360495 Units: mg/Kg |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Chloride | ND 1.5 | |
| | | |
| Sample ID LCS-32061 | SampType: Ics | TestCode: EPA Method 300.0: Anions |
| Sample ID LCS-32061 Client ID: LCSS | SampType: Ics Batch ID: 32061 | TestCode: EPA Method 300.0: Anions RunNo: 43191 |
| | | |
| Client ID: LCSS | Batch ID: 32061 Analysis Date: 6/1/2017 | RunNo: 43191 |

Qualifiers:

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

WO#: 1706002

Page 4 of 7

05-Jun-17

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

| and the second se | | | | | | | | | | |
|---|--------------|-----------|-----------|-------------|-----------|-----------|--------------|------------|------------|------|
| Sample ID LCS-32055 | SampT | Type: LC | s | Tes | tCode: El | PA Method | 8015M/D: Die | esel Rang | e Organics | |
| Client ID: LCSS | Batch | h ID: 32 | 055 | R | RunNo: 4 | 3184 | | | | |
| Prep Date: 6/1/2017 | Analysis D | Date: 6/ | 1/2017 | S | SeqNo: 1 | 359572 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 44 | 10 | 50.00 | 0 | 87.4 | 73.2 | 114 | | | |
| Surr: DNOP | 4.9 | | 5.000 | | 98.0 | 70 | 130 | | | |
| Sample ID MB-32055 | SampT | ype: ME | BLK | Test | tCode: El | PA Method | 8015M/D: Die | esel Range | e Organics | |
| Client ID: PBS | Batch | D: 32 | 055 | R | RunNo: 4 | 3184 | | | | |
| Prep Date: 6/1/2017 | Analysis D | ate: 6/ | 1/2017 | S | eqNo: 1 | 359573 | Units: mg/K | g | | |
| | | | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | Result ND | PQL 10 | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Analyte Diesel Range Organics (DRO) Notor Oil Range Organics (MRO) | | | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | 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
- R RPD outside accepted recovery limits
- 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 5 of 7

05-Jun-17

WO#: 1706002

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID 2.5UG GRO LCS | SampT | ype: LC | s | Tes | tCode: El | PA Method | 8015D: Gaso | oline Rang | e | |
|--------------------------------|---------------------|----------------------|----------------|---|----------------------|----------------|---|------------|---|-------------------------------------|
| Client ID: LCSS | Batch | n ID: R4 | 3189 | F | RunNo: 4 | 3189 | | | | |
| Prep Date: | Analysis D |)ate: 6/ | 1/2017 | 5 | SeqNo: 1 | 359964 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 99.4 | 76.4 | 125 | | | |
| Surr: BFB | 1200 | | 1000 | | 120 | 54 | 150 | | | |
| | | | | and the second se | | | and the second se | | and the second se | and the second second second second |
| Sample ID RB | SampT | уре: МЕ | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
| Sample ID RB Client ID: PBS | | ype: ME | | | tCode: El | | 8015D: Gaso | line Rang | e | |
| | | n ID: R4 | | F | | 3189 | 8015D: Gaso Units: mg/K | | e | |
| Client ID: PBS | Batch | n ID: R4 | 3189 1/2017 | F | RunNo: 4 | 3189 | | | e RPDLimit | Qual |
| Client ID: PBS Prep Date: | Batch Analysis D | n ID: R4 Date: 6/ | 3189 1/2017 | F | RunNo: 4 SeqNo: 1 | 3189 359965 | Units: mg/K | (g | | Qual |

Qualifiers:

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

Page 6 of 7

05-Jun-17

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID 100NG BTEX LC | S Samp | Type: LC | s | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
|----------------------------|------------|-----------------|-----------|-------------|-----------|-----------|--------------|-------|----------|------|
| Client ID: LCSS | Batc | h ID: B4 | 3189 | F | RunNo: 4 | 3189 | | | | |
| Prep Date: | Analysis I | Date: 6/ | 1/2017 | 5 | SeqNo: 1 | 359968 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.94 | 0.025 | 1.000 | 0 | 94.5 | 80 | 120 | | | |
| Toluene | 0.94 | 0.050 | 1.000 | 0 | 93.7 | 80 | 120 | | | |
| Ethylbenzene | 0.94 | 0.050 | 1.000 | 0 | 94.0 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 94.2 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 112 | 66.6 | 132 | | | |
| Sample ID RB | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8021B: Volat | tiles | | |
| Client ID: PBS | Batch | n ID: B4 | 3189 | F | RunNo: 4 | 3189 | | | | |
| Prep Date: | Analysis D |)ate: 6/ | 1/2017 | S | SeqNo: 1 | 359971 | 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-Bromofluorobenzene | 1.1 | | 1.000 | | 110 | 66.6 | 132 | | | |

Qualifiers:

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

Page 7 of 7

05-Jun-17

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | TEL: 505-345-397. | 4901 Hawkins auguergue, NM 87 | NE 109 Sam | ple Log-In Check List |
|--|--|----------------------------------|---------------|--|
| Client Name: BLAGG | Work Order Number | r. 1706002 | | RcptNo: 1 |
| Received By: Anne Thome Completed By: Anne Thome Reviewed By: Anne Thome | 6/1/2017 7:20:00 AM 6/1/2017 7:59:22 AM 6/11/17 | | Anne Home | |
| <u>Chain of Custody</u> 1. Custody seals intact on sample bottles? 2. Is Chain of Custody complete? 3. How was the sample delivered? | | Yes ☐ Yes ✔ <u>Courier</u> | No 🗌 | Not Present |
| Log In 4. Was an attempt made to cool the samples | ? | Yes 🗹 | No 🗌 | |
| 5. Were all samples received at a temperatur | | Yes 🗹 | No 🗌 | NA 🗆 |
| 6. Sample(s) in proper container(s)? | | Yes 🗹 | No 🗌 | |
| Sufficient sample volume for indicated test Are samples (except VOA and ONG) properties | | Yes 🗹 | No 🗌 | |
| 9. Was preservative added to bottles? | | Yes | No 🗹 | NA 🗆 |
| 10.VOA vials have zero headspace? | | Yes 🗌 Yes 🗔 | No 🗌 | No VOA Vials |
| 11. Were any sample containers received brok 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | enr | Yes 🗹 | No 🗆 | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain o | f Custody? | Yes 🖌 | No 🗌 | Adjusted? |
| 14, Is it clear what analyses were requested? | | Yes 🗹 | No 🗌 | 2 |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | | Yes 🗹 | No 🗔 – | Checked by: |
| Special Handling (if applicable) | | | | |
| 16. Was client notified of all discrepancies with | this order? | Yes | No 🗌 | NA 🗹 |
| Person Notified: By Whom: Regarding: Client Instructions: | Date Via: [| eMail [] P | none 🗌 Fax | In Person |
| 17. Additional remarks: | · · · · · · · · · · · · · · · · · · · | | | |
| 18. Cooler Information | and the second sec | Seal Date | Signed By | - 1* <u>**. **</u> * . <u>.</u> |

| AMERICA AMERICA C. ENGWEERRING INC. SS: OS) 320 - 1183 Other Other Natrix Sample Request ID Solc Zowe 8 Solc Zowe 8 C I TSF-I6 Solc Zowe 8 Relinquished by Relinquished by Relinqui | | 25007 | Date | | | | | | - | - | T/V2 | Date | C EDD (Type) | | Accreditation | Standard | email or Fax#: | Phone # | | Mailing Address: | | Client: BP | C | |
|---|-------------|------------|--|----|---|---|---|---|-----|-----|-------|---|--------------|----------|---------------|----------|----------------|---------|------------|------------------|--------------|------------|-------------------|--|
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| ANALYSIS | t hed by: | H Bleff | | | | | | | | | 12 | | | <u>q</u> | Đ | | | 11 | | | RING | 8 | ustody Record | |
| ANALYSIS | Received by | Necewer by | | | | | | | | _ | 402-1 | PK 6/2 INIT Container Type and # | Sample Temp | On Ice: | Sampler: | ų | Project Mana | | Project #: | INNI | Project Name | Standard | Turn-Around Time: | |
| ANALYSIS 4901 Hawkins NE - Albuquerd 4901 Hawkins NE - Albuquerd <tr< td=""><td>) and</td><td>nn</td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td>_</td><td>Cept</td><td>Preservative Type</td><td>perature: 27</td><td>XYes</td><td>T. BLAKS</td><td>Bualde</td><td>gen</td><td></td><td></td><td></td><td></td><td>Rush</td><td>Time:</td><td></td></tr<> |) and | nn | | | | | | | _ | _ | Cept | Preservative Type | perature: 27 | XYes | T. BLAKS | Bualde | gen | | | | | Rush | Time: | |
| HALL ENVI 4901 Hawkins NE - Albuquerd 4901 Hawkins NE - Albuquerd <t< td=""><td>2 4</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>C-0.)</td><td></td><td>202</td><td>102-</td><td>HEAL NO. 1706/02</td><td>-CF-1.0=1.7</td><td>C No</td><td></td><td></td><td></td><td></td><td></td><td>6</td><td>~</td><td>DAT</td><td>SAME</td><td></td></t<> | 2 4 | 1 | | | | | | C-0.) | | 202 | 102- | HEAL NO. 1706/02 | -CF-1.0=1.7 | C No | | | | | | 6 | ~ | DAT | SAME | |
| HALL ENVIRONMENTAL APOT Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Tel. 505-345-3975 Tax 505-345-3975 <td< td=""><td>5</td><td>Ren</td><td></td><td></td><td></td><td></td><td></td><td>and the owner of the</td><td>_</td><td>×</td><td>×</td><td>BTEX + ME</td><td>DE</td><td>-</td><td>FMB</td><td>s (802</td><td>1)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | 5 | Ren | | | | | | and the owner of the | _ | × | × | BTEX + ME | DE | - | FMB | s (802 | 1) | | | | | | | |
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| Air Bubbles (Y or N) | v | A. | | | | | | | | | | | | | | | | | | | 1 | žĒ | | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

June 06, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1706156

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

4901 Hawkins NE

Albuquerque, NM 87109

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/5/2017 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,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1706156

Date Reported: 6/6/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering | | | Clie | ent San | mple ID: Zone 9 | |
|---------------------------------|-----------|----------|--------|----------|------------------------------|-----|
| Project: MUDGE LS 6 | | | Co | ollectio | on Date: 6/2/2017 1:54:00 PM | |
| Lab ID: 1706156-002 | Matrix: | SOIL | F | Receive | ed Date: 6/5/2017 7:30:00 AM | |
| Analyses | Result | PQL | Qual U | nits | DF Date Analyzed Ba | tch |
| EPA METHOD 300.0: ANIONS | | | | | Analyst: MF | RA |
| Chloride | ND | 30 | n | ng/Kg | 20 6/5/2017 11:18:20 AM 32 | 100 |
| EPA METHOD 8015M/D: DIESEL RANG | E ORGANIC | S | | | Analyst: TO | M |
| Diesel Range Organics (DRO) | ND | 9.6 | n | ng/Kg | 1 6/5/2017 9:56:13 AM 320 | 097 |
| Motor Oil Range Organics (MRO) | ND | 48 | n | ng/Kg | 1 6/5/2017 9:56:13 AM 320 | 097 |
| Surr: DNOP | 86.3 | 70-130 | 9 | 6Rec | 1 6/5/2017 9:56:13 AM 320 | 097 |
| EPA METHOD 8015D: GASOLINE RAN | GE | | | | Analyst: NS | B |
| Gasoline Range Organics (GRO) | ND | 4.0 | n | ng/Kg | 1 6/5/2017 1:27:28 PM 320 | 090 |
| Surr: BFB | 98.2 | 54-150 | 9 | 6Rec | 1 6/5/2017 1:27:28 PM 320 | 090 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: NS | в |
| Benzene | ND | 0.020 | n | ng/Kg | 1 6/5/2017 1:27:28 PM 320 | 090 |
| Toluene | ND | 0.040 | n | ng/Kg | 1 6/5/2017 1:27:28 PM 320 | 090 |
| Ethylbenzene | ND | 0.040 | n | ng/Kg | 1 6/5/2017 1:27:28 PM 320 | 090 |
| Xylenes, Total | ND | 0.081 | п | ng/Kg | 1 6/5/2017 1:27:28 PM 320 | 090 |
| Surr: 4-Bromofluorobenzene | 120 | 66.6-132 | % | 6Rec | 1 6/5/2017 1:27:28 PM 320 | 090 |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 2 of 6 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID MB-32100 | SampType: MBLK | TestCode: EPA Method 30 | 0.0: Anions | |
|--|----------------------------------|---|----------------------------|------------|
| Client ID: PBS | Batch ID: 32100 | RunNo: 43257 | | |
| Prep Date: 6/5/2017 | Analysis Date: 6/5/2017 | SeqNo: 1362428 U | nits: mg/Kg | 2 |
| Analyte | Result PQL SPK value SF | PK Ref Val %REC LowLimit H | lighLimit %RPD RPDI | imit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-32100 | SampType: LCS | TestCode: EPA Method 300 | 0.0: Anions | |
| Sample ID LCS-32100 Client ID: LCSS | SampType: LCS Batch ID: 32100 | TestCode: EPA Method 300 RunNo: 43257 | 0.0: Anions | |
| | 1 21 | RunNo: 43257 | 0.0: Anions nits: mg/Kg | |
| Client ID: LCSS | Batch ID: 32100 | RunNo: 43257 SeqNo: 1362429 Ur | | .imit 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
- R RPD outside accepted recovery limits
- 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

WO#: 1706156 06-Jun-17

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Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

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|--|--------------------------------|---|--|--|---|---|--|--|------------------------|------|--|
| Sample ID LCS-32097 | SampT | ype: LC | S | TestCode: EPA Method 8015M/D: Diesel Range Organic | | | | | | | |
| Client ID: LCSS | Batch | ID: 32 | 097 | F | RunNo: 4 | 3241 | | | | | |
| Prep Date: 6/5/2017 | Analysis D | ate: 6/ | 5/2017 | SeqNo: 1361182 Units: | | | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range Organics (DRO) | 43 | 10 | 50.00 | 0 | 86.7 | 73.2 | 114 | | | | |
| Surr: DNOP | 3.6 | | 5.000 | | 72.5 | 70 | 130 | | | | |
| | | | | | | | | | | | |
| Sample ID MB-32097 | SampT | ype: ME | BLK | Tes | tCode: EF | PA Method | 8015M/D: Die | esel Range | e Organics | | |
| Sample ID MB-32097 Client ID: PBS | <u> </u> | ype: ME | | | tCode: EF | | 8015M/D: Die | esel Range | e Organics | | |
| | <u> </u> | ID: 320 | | F | | 3241 | 8015M/D: Die Units: mg/K | Ū | e Organics | | |
| Client ID: PBS | Batch | ID: 320 | 097 5/2017 | F | RunNo: 4 | 3241 | | Ū | e Organics RPDLimit | Qual | |
| Client ID: PBS Prep Date: 6/5/2017 Analyte | Batch Analysis Da | ID: 320 ate: 6/ | 097 5/2017 | F | RunNo: 4 SeqNo: 1 | 3241 361183 | Units: mg/K | (g | - | Qual | |
| Client ID: PBS Prep Date: 6/5/2017 | Batch Analysis Da Result | ID: 32 (ate: 6 / PQL | 097 5/2017 | F | RunNo: 4 SeqNo: 1 | 3241 361183 | Units: mg/K | (g | - | 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
- R RPD outside accepted recovery limits
- 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

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Client:Blagg EngineeringProject:MUDGE LS 6

| | | | | | | | | | the second s | |
|--|------------------------------|----------------------|--------------------|-------------|-----------------------------------|-----------------------------|----------------------------|------------|--|------|
| Sample ID MB-32090 | SampT | Гуре: МІ | BLK | Tes | tCode: E | oline Rang | е | | | |
| Client ID: PBS | Batcl | h ID: 32 | 090 | F | RunNo: 4 | 3255 | | | | |
| Prep Date: 6/2/2017 | Analysis D | Date: 6/ | 5/2017 | S | SeqNo: 1 | 361956 | Units: mg/k | ٢g | | |
| 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 | | 102 | 54 | 150 | | | |
| Surr: BFB | | Type: LC | | Tes | | | 150 8015D: Gasc | line Rang | e | |
| | SampT | Type: LC | s | | | PA Method | | oline Rang | e | |
| Sample ID LCS-32090 | SampT | h ID: 32 | :S 090 | F | tCode: El | PA Method 3255 | | U | e | |
| Sample ID LCS-32090 Client ID: LCSS | SampT Batch | h ID: 32 | S 090 5/2017 | F | tCode: El RunNo: 4 | PA Method 3255 | 8015D: Gaso | U | e RPDLimit | Qual |
| Sample IDLCS-32090Client ID:LCSSPrep Date:6/2/2017 | SampT Batch Analysis D | h ID: 32 Date: 6/ | S 090 5/2017 | F | tCode: El RunNo: 4 SeqNo: 1 | PA Method 3255 361957 | 8015D: Gaso Units: mg/K | (g | | 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
- R RPD outside accepted recovery limits
- 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

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WO#: 1706156

06-Jun-17

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-32090 | SampT | ype: MI | BLK | TestCode: EPA Method 8021B: Volatiles | | | | | | |
|--------------------------------|------------------------------------|-----------------------|---------------------------------------|---------------------------------------|----------------------------------|--------------------------------|---------------------------------|-----------|----------|------|
| Client ID: PBS | Batch | n ID: 32 | 090 | F | RunNo: 4 | 3255 | | | | |
| Prep Date: 6/2/2017 | Analysis D | Date: 6/ | 5/2017 | S | SeqNo: 1 | 361976 | 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-Bromofluorobenzene | 1.3 | | 1.000 | | 126 | 66.6 | 132 | | | |
| Sample ID LCS-32090 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8021B: Volat | iles | | |
| Client ID: LCSS | | | | - | unblas de | | | | | |
| | Batch | 1 ID: 32 | 090 | F | unNo: 4 | 3255 | | | | |
| Prep Date: 6/2/2017 | Batch Analysis D | | | | GeqNo: 1 | | Units: mg/K | g | | |
| Prep Date: 6/2/2017 Analyte | | | 5/2017 | | | | Units: mg/K HighLimit | g %RPD | RPDLimit | Qual |
| | Analysis D | ate: 6/ | 5/2017 | S | SeqNo: 1 | 361977 | | | RPDLimit | Qual |
| Analyte | Analysis D Result | ate: 6/ | 5/2017 SPK value | SPK Ref Val | eqNo: 1: %REC | 361977 LowLimit | HighLimit | | RPDLimit | Qual |
| Analyte Benzene | Analysis D Result 1.0 | PQL 0.025 | 5/2017 SPK value 1.000 | SPK Ref Val | eqNo: 1; %REC 99.8 | 361977 LowLimit 80 | HighLimit 120 | | RPDLimit | Qual |
| Analyte Benzene Toluene | Analysis D Result 1.0 1.0 | PQL 0.025 0.050 | 5/2017 SPK value 1.000 1.000 | SPK Ref Val 0 0 | 6eqNo: 1 %REC 99.8 99.9 | 361977 LowLimit 80 80 | HighLimit 120 120 | | RPDLimit | 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
- R RPD outside accepted recovery limits
- 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

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1706156

WO#: 06-Jun-17

| ANALY | CONMENTAL Ysis Ratory | Hall Environmental Albi TEL: 505-345-3975 Website: www.ha | 490. uquerqu FAX: | l Hawkins N ue, NM 8710 505-345-410 | 09 San | nple Log-In Check List |
|---|--|--|--------------------------|---|--------------------|---|
| Client Name: | BLAGG | Work Order Number: | 1706 | 156 | | RcptNo: 1 |
| Received By: Completed By: Reviewed By: | Anne Thome Anne Thome | 6/5/2017 7:30:00 AM 6/5/2017 8:08:00 AM bl 5l l7- | | | Arre H- Arre H- | |
| 2. Is Chain of C | tody Is intact on sample bottles? Custody complete? sample delivered? | | Yes Yes <u>Cou</u> | | No 🗌 No 🗌 | Not Present ☑ Not Present □ |
| | mpt made to cool the samples' | ? | Yes | | No 🗆 | NA 🗆 |
| 5. Were all sam | nples received at a temperature | e of >0° C to 6.0°C | Yes | | No 🗋 | |
| 6. Sample(s) in | proper container(s)? | | Yes | | No 🗌 | |
| | nple volume for indicated test((except VOA and ONG) prope | | Yes Yes | | No 🗌 | |
| 9. Was preserva | ative added to bottles? | | Yes | | No 🗹 | NA 🗌 |
| | ve zero headspace? mple containers received broke | en? | Yes Yes | | No 🗌 No 🗹 | No VOA Vials # of preserved bottles checked |
| | ork match bottle labels? ancies on chain of custody) | | Yes | | No 🗌 | for pH: (<2 or >12 unless noted) |
| | correctly identified on Chain of | Custody? | Yes | | No 🗌 | Adjusted? |
| 15. Were all holdi | at analyses were requested? ing times able to be met? sustomer for authorization.) | | Yes | | No 🗌 | Checked by: |
| | ing (if applicable) tified of all discrepancies with t | his order? | Yes | | No 🗆 | |
| Person By Who Regardi | Notified: | Date Via: |] eMa | | one 🗌 Fax | |
| Cooler No | Temp °C Condition Set 1.0 Good Yes | | eal Da | ate S | igned By | |
| Page 1 of | 1 | | | | | |

| Client: | hain- | of-Cu | stody Record | Turn-Around | | SAME DAF | | | | | | | | | | | | | NTA | | |
|----------------------------|------------------------|------------|--|---|--------------------------------------|-------------|-----------|------------------|-------------------|--------------------|--------------------|---------------------------|---------------|---|-----------------|-------------|-----------------|----------|-----|----|----------------------|
| | DI H | MERICA | and the second | Standard Project Name | | | | | | A | N | AL | YS | SIS | 5 L | AE | 30 | RA | TO | RY | |
| 1 | BLAG6 | ENGIN | EERING- | | | 1- | | | | 2 | wwv | v.hal | llenv | ironi | meni | tal.co | m | | | | |
| Mailing | Address | : | | 1000 | GE LS | Q | | 490 | 01 H | awki | ns N | NE - | Alb | uqu | erqu | e, NI | M 87 | 109 | | | |
| | | 30 | | Project #: | | |] | | | 5-34 | | | | | | | 410 | | | | |
| Phone # | # (50 | 5) 32 | D-1183 | 1 | | | | | | | | A | nalj | ysis | Req | uest | : | | | | |
| email or | | | | Project Mana | ger: | | | (K) | 0 | | | | | 04) | | | | | | | Γ |
| QA/QC F | Package: | | | STEVE MOSKAL | | | (8021) | sor | MR | | | 6 | | SC, | PCB's | | | | | | |
| Stan | dard | | Level 4 (Full Validation) | | | | | (Ga | 102 | | | SIME | | PO | PG 0 | | | | | | |
| Accredi | | | | Sampler: J | EFF BLAG | 6 | TMB's | + TPH (Gas only) | (GRO / DRO / MRO) | = | 1) | 205 | | 0 | / 8082 | | | | | | 5 |
| | AP | □ Othe | ۲ | and the second se | X Yes | D No | I H | + | RO | 18. | 504. | 82 | 10 | 03.1 | 8/8 | | (Y) | | | | OT N |
| | (Type) | - | | Sample Tem | The second is a second second second | 0 | MEBE | MTBE | (0 | po | po | 0.0 | etale | N. | side | F | 2 | W | | | 2 |
| Date | Time | Matrix | Sample Request ID | Container Type and # Mcottle_ | Preservative Type | HEAL NO. | BTEX + MA | BTEX + MI | TPH 8015B | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides | 8260B (VOA) | 8270 (SemI-VOA) | CHLORIDE | | | Air Bubbles (Y or N) |
| hor | 1341 | SOIL | TSP-17 | 406×1 | COOL | -201 | X | | X | | | | | | | | | X | | | |
| ų | 1354 | 11 | ZONE 9 | ы | и | 202 | × | | × | | - | | | | | | | * | | | |
| | | | | | | | | | | | | <u></u> | - | | | | | | | | |
| - | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 1 | | | | | - | | - | \vdash | | | | | | ┢ |
| | | | | | | | | | | | | | | | | | | | | | F |
| | | | | | | | | - | | | | | | | | | | | | + | $\left \right $ |
| Date: 9 9/2017 Date: | Time: 1847 Time: | Relinquist | l Blagg | Received by: Autority 4/7 1847 Received by: Received by: Received by: Received by: Received by: Received by: Received by: Received by: Date Time Date Time | | | | 00 | 518 | 3M- | -E: | | e Ma Xgel | | | | | | | | |
| 1411 | 1 MIS/ | 141U | our wheth | U | Unn 106/05/130 | | | | | PLE | Th | CEAT | ED | wa | K I | HzC | z | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be dearly notated on the analytical report.



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

June 08, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS #6

OrderNo.: 1706315

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/7/2017 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,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Hall Environmental Analysis | Labora | atory, In | c. | | Date Reported: 6/8/201 | 7 |
|--|---------|-----------|----------|-----------------|---|-------|
| CLIENT: Blagg Engineering Project: MUDGE LS #6 Lab ID: 1706315-001 | Matrix: | SOIL | Coll | ection Date: 6/ | SW of 2nd Excav @ 7'- 6/2017 2:01:00 PM 7/2017 7:30:00 AM | -17' |
| Analyses | Result | PQL | Qual Uni | ts DF | Date Analyzed | Batch |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg | 'Kg 20 | 6/7/2017 11:16:52 AM | 32151 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | | Analyst | : TOM |
| Diesel Range Organics (DRO) | ND | 9.7 | mg | 'Kg 1 | 6/7/2017 8:54:51 AM | 32146 |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/ | Kg 1 | 6/7/2017 8:54:51 AM | 32146 |
| Surr: DNOP | 84.1 | 70-130 | %R | ec 1 | 6/7/2017 8:54:51 AM | 32146 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 3.8 | mg/ | Kg 1 | 6/7/2017 9:35:33 AM | 32141 |
| Surr: BFB | 105 | 54-150 | %R | ec 1 | 6/7/2017 9:35:33 AM | 32141 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.019 | mg/ | Kg 1 | 6/7/2017 9:35:33 AM | 32141 |
| Toluene | ND | 0.038 | mg/ | Kg 1 | 6/7/2017 9:35:33 AM | 32141 |
| Ethylbenzene | ND | 0.038 | mg/ | Kg 1 | 6/7/2017 9:35:33 AM | 32141 |
| Xylenes, Total | ND | 0.077 | mg/ | Kg 1 | 6/7/2017 9:35:33 AM | 32141 |
| Surr: 4-Bromofluorobenzene | 125 | 66.6-132 | %R | ec 1 | 6/7/2017 9:35:33 AM | 32141 |

Analytical Report Lab Order 1706315

(This is ID'd as Zone 10 on Figures and Tables in BEI Report)

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 5 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

WO#: 1706315 08-Jun-17

| Client: Project: | Blagg Engineering MUDGE LS #6 | | | | | | | |
|---------------------|----------------------------------|---------------|-------------|---------------------|---------------|------|----------|------|
| Sample ID MB-32 | 151 SampTyp | e: mblk | Tes | tCode: EPA Method | 300.0: Anions | | | |
| Client ID: PBS | Batch II | D: 32151 | F | RunNo: 43316 | | | | |
| Prep Date: 6/7/2 | Analysis Date | e: 6/7/2017 | S | SeqNo: 1363806 | Units: mg/Kg | | | |
| Analyte | Result | PQL SPK value | SPK Ref Val | %REC LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | |
| Sample ID LCS-3 | 2151 SampTyp | e: Ics | Tes | tCode: EPA Method | 300.0: Anions | | | |
| Client ID: LCSS | Batch II | D: 32151 | F | RunNo: 43316 | | | | |
| Prep Date: 6/7/20 | Analysis Date | e: 6/7/2017 | S | GeqNo: 1363807 | Units: mg/Kg | | | |
| Analyte | Result | PQL SPK value | SPK Ref Val | %REC LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 15.00 | 0 | 94.7 90 | 110 | | | |

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering MUDGE LS #6 **Project:**

| Sample ID LCS-32146 | SampType: LCS TestCode: EPA Meth | | | | | | 8015M/D: Di | esel Rang | e Organics | |
|--------------------------------|----------------------------------|---------|-----------|-------------|-----------|-----------|-------------|------------|------------|------|
| Client ID: LCSS | Batch | ID: 32 | 146 | F | RunNo: 4 | 3305 | | | | |
| Prep Date: 6/7/2017 | Analysis D | ate: 6/ | 7/2017 | S | SeqNo: 1 | 363279 | Units: mg/k | (g | | 2 |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 10 | 50.00 | 0 | 91.6 | 73.2 | 114 | | | |
| Surr: DNOP | 3.8 | | 5.000 | | 76.2 | 70 | 130 | | | |
| Sample ID MB-32146 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Range | e Organics | |
| Client ID: PBS | Batch | ID: 32 | 146 | F | RunNo: 4 | 3305 | | | | |
| Prep Date: 6/7/2017 | Analysis Da | ate: 6/ | 7/2017 | S | SeqNo: 1 | 363280 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 8.1 | | 10.00 | | 81.2 | 70 | 130 | | | |

Qualifiers:

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

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08-Jun-17

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS #6

| Sample ID MB-32141 | SampT | ype: ME | BLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|--|---------------------|-------------------|---------------|--|----------------------|----------------|-------------|-----------|---------------|------|
| Client ID: PBS | Batch | ID: 32 | 141 | F | RunNo: 43317 | | | | | |
| Prep Date: 6/6/2017 | Analysis D | ate: 6/ | 7/2017 | 5 | SeqNo: 1 | 364057 | Units: mg/K | g | | |
| 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 | | 101 | 54 | 150 | | | |
| Sample ID LCS-32141 | | | 0 | Tee | Cada E | | | | | |
| Sample ID L03-32141 | SampT | ype: LC | 5 | Tes | Code: El | AMethod | 8015D: Gaso | line Rang | e | |
| Client ID: LCSS | | ID: 32 | | | RunNo: 4 | | 8015D: Gaso | line Rang | e | |
| | | ID: 32 | 141 | F | | 3317 | Units: mg/K | | e | |
| Client ID: LCSS | Batch | ID: 32 | 141 7/2017 | F | RunNo: 4 | 3317 | | | e RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/6/2017 | Batch Analysis D | ID: 32 ate: 6/ | 141 7/2017 | F | RunNo: 4 SeqNo: 1 | 3317 364058 | Units: mg/K | g | | 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
- R RPD outside accepted recovery limits
- 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
- Ρ Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

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08-Jun-17

WO#: 1706315

Client: Project: MUDGE LS #6

Blagg Engineering

| Sample ID MB-32141 | Samo | NOO: ME | | Tos | tCode: El | PA Mothod | 8021B: Volat | ilos | | |
|---|---|-----------------------------------|--|---------------------------------|--|--|---|------|----------|------|
| | | ype: ME | | | | | OUZID. VOIA | lies | | |
| Client ID: PBS | Batch | n ID: 32 | 141 | F | RunNo: 4 | 3317 | | | | |
| Prep Date: 6/6/2017 | Analysis D | Date: 6/ | 7/2017 | S | SeqNo: 1 | 364078 | 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-Bromofluorobenzene | 1.3 | | 1.000 | | 126 | 66.6 | 132 | | | |
| | | | | | | | | | | |
| Sample ID LCS-32141 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8021B: Volat | iles | | |
| Sample ID LCS-32141 Client ID: LCSS | | ype: LC | | | tCode: El | | 8021B: Volat | iles | | |
| | | n ID: 32 | 141 | F | | 3317 | 8021B: Volat Units: mg/K | | | |
| Client ID: LCSS | Batch | n ID: 32 | 141 7/2017 | F | RunNo: 4 | 3317 | | | RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/6/2017 | Batch Analysis D | n ID: 32 Date: 6/ | 141 7/2017 | F | RunNo: 4 GeqNo: 1 | 3317 364079 | Units: mg/K | g | RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/6/2017 Analyte | Batch Analysis D Result | n ID: 32 Date: 6/ PQL | 141 7/2017 SPK value | R S SPK Ref Val | RunNo: 4 SeqNo: 1 %REC | 3317 364079 LowLimit | Units: mg/K HighLimit | g | RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/6/2017 Analyte Benzene | Batch Analysis D Result 1.1 | Date: 6/ PQL 0.025 | 141 7/2017 SPK value 1.000 | F S SPK Ref Val 0 | RunNo: 4 GeqNo: 1 %REC 105 | 3317 364079 LowLimit 80 | Units: mg/K HighLimit 120 | g | RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/6/2017 Analyte Benzene Toluene | Batch Analysis D Result 1.1 1.1 | Date: 6/ PQL 0.025 0.050 | 141 7/2017 SPK value 1.000 1.000 | F S SPK Ref Val 0 0 | RunNo: 4 SeqNo: 1 %REC 105 106 | 3317 364079 LowLimit 80 80 | Units: mg/K HighLimit 120 120 | g | RPDLimit | Qual |

Qualifiers:

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

Page 5 of 5

WO#: 1706315 08-Jun-17

| ANAL | RONMENTAL YSIS RATORY | Hall Environmental Alba TEL: 505-345-3975 Website: www.ha | 4901 uquerqu FAX: S | Hawkins æ, NM 87 605-345-4 | NE 109 Sa | Sample Log-In Check List | | | | |
|--------------------------------------|--|--|---------------------------|----------------------------------|-------------------------|--|------------------------|--|--|--|
| Client Name: | BLAGG | Work Order Number: | 1706 | 315 | | Rept | No: 1 | | | |
| Received By: | Anne Thome | 6/7/2017 7:30:00 AM | | | Anne R Anne R | in the second se | | | | |
| Completed By: Reviewed By: | Anne Thome ENM | 67/2017 7:52:00 AM 06/07/17 | | | Anne A | | | | | |
| Chain of Cus | tody | | | | | | | | | |
| 1. Custody sea | ils intact on sample bottles? | | Yes | | No 🗌 | Not Present | | | | |
| 2. Is Chain of C | Custody complete? | | Yes | \checkmark | No | Not Present | | | | |
| 3. How was the | sample delivered? | | Cou | ier | | | | | | |
| Log In | | | | | | | | | | |
| 4. Was an atte | mpt made to cool the samples | ? | Yes | | No |] NA [| | | | |
| 5. Were all san | nples received at a temperature | of >0° C to 6.0°C | Yes | | No 🗌 | . NA [|] | | | |
| 6. Sample(s) in | a proper container(s)? | | Yes | | No |] | | | | |
| 7. Sufficient sa | mple volume for indicated test(| 5)? | Yes | | No 🗌 | | | | | |
| 8. Are samples | (except VOA and ONG) proper | ly preserved? | Yes | \checkmark | No 🗌 | | _ | | | |
| 9. Was preserv | ative added to bottles? | | Yes | | No 🗹 | NA |] | | | |
| | ive zero headspace? | | Yes | | No 🗌 | No VOA Vials | 3 | | | |
| 11. Were any sa | ample containers received brok | en? | Yes | | No 🗹 | # of preserved bottles checked | | | | |
| | ork match bottle labels? bancies on chain of custody) | , | Yes | \checkmark | No | for pH: | 2 or >12 unless noted) | | | |
| | correctly identified on Chain of | Custody? | Yes | \checkmark | No 🗌 | Adjusted? | | | | |
| | at analyses were requested? | | Yes | | No 🗌 | | | | | |
| | ling times able to be met? customer for authorization.) | | Yes | | No 🗌 | Checked by | : | | | |
| Special Hand | ling (if applicable) | | | | | | | | | |
| | otified of all discrepancies with | his order? | Yes | | No 🗌 | NA 🗹 | 3 | | | |
| Person | Notified: | Date | | MANUFACTION PUT IN | | w ⁻ | | | | |
| By Who | | Via: | eMa | il 🗌 P | hone 🗌 Fax | x 🗌 In Person | | | | |
| Regard | | | | | | | | | | |
| | nstructions: | | | | nononing modern barries | čeronikonova policionovoče nikoni elimana građanja (Me | | | | |
| 17. Additional re | marks: | | | | | | | | | |
| 18. <u>Cooler Infor</u> Cooler No | Temp °C Condition Se | | eal Da | te | Signed By | _ | | | | |
| 1 | 1.3 Good Yes | i | | 1 | | | | | | |

Page 1 of 1

| Client: | and the second s | of-Cu | stody Record | Turn-Around | Time: | JAME | | | | | | | | | | | | | NT | | |
|---|--|--------------|---------------------------|--|----------------------------------|-----------------------------------|--------------|----------------|----------------|--------------------|-------------|-----------------------|---------------|---|---|-----------------------|-----------------|--------------|-----|---------------|----------------|
| | and the second se | | | Project Name | | | | | | | | | | | | | | KA | TC | ĸ | Y |
| BLAGG ENGR. | | | | | -2 #6 | | | | | wwv | v.hal | lenv | ironı | nent | al.co | om | | | | | |
| Mailing Address: | | | | | 1000 | | - | 49 | 01 H | awki | ns N | IE - | Alb | uqu | erqu | e, NI | M 87 | 109 | | | |
| | | | 8 | Project #: | | | | Те | el. 50 | 5-34 | 5-39 | and the second second | | THE REAL PROPERTY. | The local division in | ALL SALES STREET, AND | 410 | 7 | | | |
| Phone #: (505) 370-1183 | | | | | | | | | | | | A | naly | | Req | uest | | 100 | | | |
| email or | Fax#: | | | Project Mana | ger: | | = | (yin | RO | | | | | O4) | 60 | | | | | | |
| QA/QC F | - | | | | BLASE | 5 | HMB's (8021) | TPH (Gas only) | / DRO / MRO) | | | (S) | | 04,S | CB' | | | | | 1 | 2 |
| Stan | | | Level 4 (Full Validation) | | 1 1/ | -nV | | O) | R0 | | | (SIMS) | | 2,P(| 32 P | | | | | | E |
| Accreditation | | | | Sampler: N | J. VEE | ζ <u>-</u> Ζ_ <u> = No</u> | | + TPF | SO/D | 18.1) | 504.1) | 8270 | · | ON,EO | / 808 | | A) | Nr | | | or N) |
| □ EDD (Type) | | | Semiolearem | oleratione | | | BE | Ð | d 4 | od 5 | lor | tals | I'NC | ides | 1 | Nº. | 5 | | | COM Sec (Y or | |
| Date | Time | Matrix | Sample Request ID | pblot() Container Type and # MentKd | Preservative Type | HEAL NO 1906315 | X | BTEX + MTBE | TPH 8015B (GRO | TPH (Method 418.1) | EDB (Method | PAH's (8310 or | RCRA 8 Metals | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | 5 PT. COM POST |
| 6/6/17 | 1401 | SOIL | NOW OF ZNO EXAN. | 402-1 | COOL | -00 | V | | V | | | | | | | | | \checkmark | | | V |
| | | | e 7'-17' | | | | | | | | | | | | | | | - | | | |
| | | | | | | | | | | | | | | | | | + | | _ | - | |
| | | | | | | | + . | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | _ | |
| | | | | | | | - | - | | | | | | | | | | | | + | + |
| | | | | | | ******* | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Date: Time: Relinquished by: | | Received by: | bot | Date Time 6/6/,-7 /500 | | | s: 4 | | | | | | | TRE | 11 3 | STEL | Er | n05 | KAL | | |
| Date: Time: Relinquished by: 14/11 1844 Mistry Walters | | | Received by: | lan= | Date Time DU/01/07/17 0736 | العا | 82 (| <u>E</u> | mei | 57:2 | 6 | 1 - | 001 | 8m | 1-8 | ≣: * | nu | 06E | 50 | 6 | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



June 13, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: Mudge LS 6

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

OrderNo.: 1706556

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/10/2017 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,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical Report |
|--------------------------|
| Lab Order 1706556 |

Date Reported: 6/13/2017

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Blagg Engineering
 Client Sample ID: Zone 11

 Project:
 Mudge LS 6
 Collection Date: 6/9/2017 1:50:00 PM

 Lab ID:
 1706556-001
 Matrix: MEOH (SOIL)
 Received Date: 6/10/2017 11:15:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|--------------------------------|--------------|--------|----------|----|-----------------------|--------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 6/12/2017 12:02:28 PM | 32225 |
| EPA METHOD 8015D MOD: GASOL | INE RANGE | | | | Analyst | AG |
| Gasoline Range Organics (GRO) | ND | 3.1 | mg/Kg | 1 | 6/12/2017 1:11:59 PM | R43427 |
| Surr: BFB | 92.7 | 70-130 | %Rec | 1 | 6/12/2017 1:11:59 PM | R43427 |
| EPA METHOD 8015M/D: DIESEL RA | NGE ORGANICS | | | | Analyst | TOM |
| Diesel Range Organics (DRO) | ND | 9.4 | mg/Kg | 1 | 6/12/2017 12:27:09 PM | 32222 |
| Motor Oil Range Organics (MRO) | ND | 47 | mg/Kg | 1 | 6/12/2017 12:27:09 PM | 32222 |
| Surr: DNOP | 92.1 | 70-130 | %Rec | 1 | 6/12/2017 12:27:09 PM | 32222 |
| EPA METHOD 8260B: VOLATILES | SHORT LIST | | | | Analyst | AG |
| Benzene | ND | 0.016 | mg/Kg | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Toluene | ND | 0.031 | mg/Kg | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Ethylbenzene | ND | 0.031 | mg/Kg | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Xylenes, Total | ND | 0.062 | mg/Kg | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Surr: 1,2-Dichloroethane-d4 | 113 | 70-130 | %Rec | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %Rec | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Surr: Dibromofluoromethane | 119 | 70-130 | %Rec | 1 | 6/12/2017 1:11:59 PM | A43427 |
| Surr: Toluene-d8 | 108 | 70-130 | %Rec | 1 | 6/12/2017 1:11:59 PM | A43427 |
| | | | | | | |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank | | | |
|-------------|----|---|----|---|--|--|--|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | | | |
| | H | H Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of | | | |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | | | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | | | |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified | | | |
| | | | | | | | |

| Hall Environmental Analysis Laboratory, Inc. Date Reported: 6/13/2017 | | | | | | | | | |
|---|---------------|---|------------|----|-----------------------|--------|--|--|--|
| CLIENT: Blagg Engineering Project: Mudge LS 6 Lab ID: 1706556-002 | Matrix: | Client Sample ID: Zone 12 Collection Date: 6/9/2017 1:59:00 PM Matrix: MEOH (SOIL) Received Date: 6/10/2017 11:15:00 AM | | | | | | | |
| Analyses | Result | PQL | Qual Units | DF | Date Analyzed | Batch | | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA | | | |
| Chloride | 41 | 30 | mg/Kg | 20 | 6/12/2017 12:14:53 PM | 32225 | | | |
| EPA METHOD 8015D MOD: GASO | LINE RANGE | | | | Analyst | AG | | | |
| Gasoline Range Organics (GRO) | ND | 1.4 | mg/Kg | 1 | 6/12/2017 1:41:10 PM | R43427 | | | |
| Surr: BFB | 93.8 | 70-130 | %Rec | 1 | 6/12/2017 1:41:10 PM | R43427 | | | |
| EPA METHOD 8015M/D: DIESEL I | RANGE ORGANIC | S | | | Analyst | TOM | | | |
| Diesel Range Organics (DRO) | ND | 9.5 | mg/Kg | 1 | 6/12/2017 12:55:17 PM | 32222 | | | |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 6/12/2017 12:55:17 PM | 32222 | | | |
| Surr: DNOP | 92.7 | 70-130 | %Rec | 1 | 6/12/2017 12:55:17 PM | 32222 | | | |
| EPA METHOD 8260B: VOLATILES | SHORT LIST | | | | Analyst | AG | | | |
| Benzene | ND | 0.0072 | mg/Kg | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Toluene | ND | 0.014 | mg/Kg | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Ethylbenzene | ND | 0.014 | mg/Kg | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Xylenes, Total | ND | 0.029 | mg/Kg | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Surr: 1,2-Dichloroethane-d4 | 112 | 70-130 | %Rec | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %Rec | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Surr: Dibromofluoromethane | 122 | 70-130 | %Rec | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |
| Surr: Toluene-d8 | 108 | 70-130 | %Rec | 1 | 6/12/2017 1:41:10 PM | A43427 | | | |

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

| Qualifiers: | rs: * Value exceeds Maximum Contaminant Level. | | В | Analyte detected in the associated Method Blank |
|-------------|--|---|----|---|
| | D | Sample Diluted Due to Matrix | | Value above quantitation range |
| | H Holding times for preparation or analysis exceededND Not Detected at the Reporting LimitR RPD outside accepted recovery limits | | J | Analyte detected below quantitation limits Page 2 of 9 |
| | | | Р | Sample pH Not In Range |
| | | | RL | Reporting Detection Limit |
| | S | S % Recovery outside of range due to dilution or matrix | | Sample container temperature is out of limit as specified |
| | | | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 1706556

Date Reported: 6/13/2017

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

Lab Order 1706556

Date Reported: 6/13/2017

Hall Environmental Analysis Laboratory, Inc.

| Analyses | Res | ılt | POL Onal | Units | DF Date Analyzed | B |
|---------------|------------------|------|-------------|------------|--------------------------------|---|
| Lab ID: 1706 | 556-003 M | trix | MEOH (SOIL) | Receive | ed Date: 6/10/2017 11:15:00 AM | |
| Project: Mudg | ge LS 6 | | | Collectio | n Date: 6/9/2017 2:05:00 PM | |
| CLIENT: Blagg | g Engineering | | (| Client San | nple ID: Zone 13 | |
| | | | | | | |

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|--------|----------|----|-----------------------|--------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 6/12/2017 12:27:17 PM | 32225 |
| EPA METHOD 8015D MOD: GASOLINE | RANGE | | | | Analyst | AG |
| Gasoline Range Organics (GRO) | 74 | 17 | mg/Kg | 5 | 6/12/2017 11:14:51 AM | R43427 |
| Surr: BFB | 95.6 | 70-130 | %Rec | 5 | 6/12/2017 11:14:51 AM | R43427 |
| EPA METHOD 8015M/D: DIESEL RANGI | | 6 | | | Analyst | TOM |
| Diesel Range Organics (DRO) | 130 | 9.9 | mg/Kg | 1 | 6/12/2017 1:23:27 PM | 32222 |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 6/12/2017 1:23:27 PM | 32222 |
| Surr: DNOP | 94.0 | 70-130 | %Rec | 1 | 6/12/2017 1:23:27 PM | 32222 |
| EPA METHOD 8260B: VOLATILES SHO | RT LIST | | | | Analyst | AG |
| Benzene | ND | 0.086 | mg/Kg | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Toluene | ND | 0.17 | mg/Kg | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Ethylbenzene | ND | 0.17 | mg/Kg | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Xylenes, Total | 1.2 | 0.34 | mg/Kg | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 70-130 | %Rec | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Surr: 4-Bromofluorobenzene | 97.8 | 70-130 | %Rec | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Surr: Dibromofluoromethane | 96.8 | 70-130 | %Rec | 5 | 6/12/2017 11:14:51 AM | A43427 |
| Surr: Toluene-d8 | 102 | 70-130 | %Rec | 5 | 6/12/2017 11:14:51 AM | A43427 |

| and the second se | | | | |
|---|----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 3 of 9 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

| Analytical] | Report |
|--------------|--------|
|--------------|--------|

Lab Order 1706556

Date Reported: 6/13/2017

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | POL Qual | Units | DF Date Analyzed |
|-----------------|-------------------|---------|-------------|------------|-------------------------------|
| Lab ID: | 1706556-004 | Matrix: | MEOH (SOIL) | Receive | d Date: 6/10/2017 11:15:00 AM |
| Project: | Mudge LS 6 | | | Collection | n Date: 6/9/2017 2:15:00 PM |
| CLIENT: | Blagg Engineering | | C | lient Sam | ple ID: Zone 14 |

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|--------------------------------|------------------|--------|----------|----|-----------------------|--------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 6/12/2017 12:39:42 PM | 32225 |
| EPA METHOD 8015D MOD: GASOL | INE RANGE | | | | Analyst | AG |
| Gasoline Range Organics (GRO) | 270 | 16 | mg/Kg | 5 | 6/12/2017 2:39:58 PM | R43427 |
| Surr: BFB | 95.9 | 70-130 | %Rec | 5 | 6/12/2017 2:39:58 PM | R43427 |
| EPA METHOD 8015M/D: DIESEL RA | ANGE ORGANICS | | | | Analyst | TOM |
| Diesel Range Organics (DRO) | 180 | 9.7 | mg/Kg | 1 | 6/12/2017 1:51:35 PM | 32222 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 6/12/2017 1:51:35 PM | 32222 |
| Surr: DNOP | 93.5 | 70-130 | %Rec | 1 | 6/12/2017 1:51:35 PM | 32222 |
| EPA METHOD 8260B: VOLATILES | SHORT LIST | | | | Analyst | AG |
| Benzene | ND | 0.080 | mg/Kg | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Toluene | ND | 0.16 | mg/Kg | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Ethylbenzene | 0.29 | 0.16 | mg/Kg | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Xylenes, Total | 6.2 | 0.32 | mg/Kg | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Surr: 1,2-Dichloroethane-d4 | <mark>111</mark> | 70-130 | %Rec | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Surr: 4-Bromofluorobenzene | 95.6 | 70-130 | %Rec | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Surr: Dibromofluoromethane | 107 | 70-130 | %Rec | 5 | 6/12/2017 2:39:58 PM | A43427 |
| Surr: Toluene-d8 | 102 | 70-130 | %Rec | 5 | 6/12/2017 2:39:58 PM | A43427 |
| | | | | | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 4 of 9 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

| CLIENT: | Blagg Engineering | Client Sample ID: Zone 15 | | | | | |
|-----------------|--------------------------|---------------------------|------------|---------------------|-----------|-----------------------|--------|
| Project: | Mudge LS 6 | | | Collection I | Date: 6/9 | 0/2017 2:11:00 PM | |
| Lab ID: | 1706556-005 | Matrix: | MEOH (SOIL |) Received I | Date: 6/1 | 0/2017 11:15:00 AM | |
| Analyses | | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
| EPA MET | HOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | | ND | 30 | mg/Kg | 20 | 6/12/2017 12:52:07 PM | 32225 |
| EPA MET | HOD 8015D MOD: GASOLINE | RANGE | | | | Analyst | AG |
| Gasoline | Range Organics (GRO) | 7.7 | 3.1 | mg/Kg | 1 | 6/12/2017 2:10:32 PM | R43427 |
| Surr: E | BFB | 95.1 | 70-130 | %Rec | 1 | 6/12/2017 2:10:32 PM | R43427 |
| EPA MET | HOD 8015M/D: DIESEL RANG | E ORGANIC | S | | | Analyst | TOM |
| Diesel Ra | ange Organics (DRO) | ND | 10 | mg/Kg | 1 | 6/12/2017 2:20:02 PM | 32222 |
| Motor Oil | Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 6/12/2017 2:20:02 PM | 32222 |
| Surr: D | NOP | 92.3 | 70-130 | %Rec | 1 | 6/12/2017 2:20:02 PM | 32222 |
| EPA MET | HOD 8260B: VOLATILES SHO | RT LIST | | | | Analyst: | AG |
| Benzene | | ND | 0.015 | mg/Kg | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Toluene | | ND | 0.031 | mg/Kg | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Ethylbenz | zene | ND | 0.031 | mg/Kg | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Xylenes, | Total | ND | 0.062 | mg/Kg | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Surr: 1 | ,2-Dichloroethane-d4 | 114 | 70-130 | %Rec | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Surr: 4 | -Bromofluorobenzene | 94.3 | 70-130 | %Rec | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Surr: D | Dibromofluoromethane | 122 | 70-130 | %Rec | 1 | 6/12/2017 2:10:32 PM | A43427 |
| Surr: T | oluene-d8 | 121 | 70-130 | %Rec | 1 | 6/12/2017 2:10:32 PM | A43427 |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 1706556 Date Reported: 6/13/2017

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 5 of 9 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Hall Environmental Analysis Laboratory, Inc. -

Client: Blagg Engineering **Project:** Mudge LS 6

| Sample ID MB-32225 | SampType: mblk | TestCode: EPA Method | 300.0: Anions | |
|--|----------------------------------|--|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 32225 | RunNo: 43424 | | |
| Prep Date: 6/12/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367904 | Units: mg/Kg | |
| Analyte | Result PQL SPK value S | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-32225 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32225 Client ID: LCSS | SampType: Ics Batch ID: 32225 | TestCode: EPA Method RunNo: 43424 | 300.0: Anions | |
| | | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32225 | RunNo: 43424 SeqNo: 1367905 | | RPDLimit Qual |

Qualifiers:

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

Page 6 of 9

13-Jun-17

WO#: 1706556

Client: Blagg Engineering **Project:** Mudge LS 6

| Sample ID LCS-32222 | SampType: LCS | TestCode: EPA Method 8015 | M/D: Diesel Range Organics |
|--------------------------------|--------------------------|--------------------------------|----------------------------|
| Client ID: LCSS | Batch ID: 32222 | RunNo: 43422 | |
| Prep Date: 6/12/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367204 Unit | s: mg/Kg |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit Hig | hLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 52 10 50.00 | 0 104 73.2 | 114 |
| Surr: DNOP | 4.7 5.000 | 93.1 70 | 130 |
| Sample ID MB-32222 | SampType: MBLK | TestCode: EPA Method 8015 | M/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 32222 | RunNo: 43422 | |
| Prep Date: 6/12/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367205 Units | s: mg/Kg |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit Hig | hLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | ND 10 | | |
| Motor Oil Range Organics (MRO) | ND 50 | | |
| Surr: DNOP | 9.6 10.00 | 96.0 70 | 130 |
| Sample ID LCS-32210 | SampType: LCS | TestCode: EPA Method 8015 | M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 32210 | RunNo: 43422 | |
| Prep Date: 6/9/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367518 Units | s: %Rec |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit Higl | hLimit %RPD RPDLimit Qual |
| Surr: DNOP | 4.7 5.000 | 94.1 70 | 130 |
| Sample ID MB-32210 | SampType: MBLK | TestCode: EPA Method 8015 | W/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 32210 | RunNo: 43422 | |
| Prep Date: 6/9/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367520 Units | 3: %Rec |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit High | hLimit %RPD RPDLimit Qual |
| Surr: DNOP | 9.2 10.00 | 91.9 70 | 130 |

Qualifiers:

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

1706556 13-Jun-17

WO#:

Page 7 of 9

Reporting Detection Limit

Client: Blagg Engineering **Project:** Mudge LS 6

| | | | | | | | and the state purport protocol | | | |
|-----------------------------|---|------------------|-----------|-------------|--------------|-----------|--------------------------------|-------------|----------|------|
| Sample ID rb | SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List | | | | | | | | | |
| Client ID: PBS | Batc | Batch ID: A43427 | | | RunNo: 43427 | | | | | |
| Prep Date: | Analysis [| Date: 6/ | 12/2017 | 5 | SeqNo: 1 | 367294 | 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 | 0.54 | | 0.5000 | | 108 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.52 | | 0.5000 | | 104 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.51 | | 0.5000 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.51 | | 0.5000 | | 102 | 70 | 130 | | | |
| Sample ID 100ng Ics | SampT | Type: LC | S | Tes | tCode: El | PA Method | 8260B: Volat | tiles Short | List | |
| Client ID: LCSS | Batch | h ID: A4 | 3427 | F | RunNo: 4 | 3427 | | | | |
| Prep Date: | Analysis D | Date: 6/ | 12/2017 | S | SeqNo: 1 | 367295 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.99 | 0.025 | 1.000 | 0 | 98.8 | 70 | 130 | | | |
| Toluene | 0.83 | 0.050 | 1.000 | 0 | 83.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.57 | | 0.5000 | | 113 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 0.54 | | 0.5000 | | 107 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 0.53 | | 0.5000 | | 106 | 70 | 130 | | | |
| Surr: Toluene-d8 | 0.52 | | 0.5000 | | 104 | 70 | 130 | | | |
| oun. rolaono ao | 0.01 | | | | | | | | | |

Qualifiers:

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

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WO#: 1706556

13-Jun-17

Client:Blagg EngineeringProject:Mudge LS 6

| Qual |
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| Qual |
| Qual |
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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
- R RPD outside accepted recovery limits
- 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

1706556 13-Jun-17

WO#:

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| HALL ENVIRONMENTAL ANALYSIS LABORATORY | TEL: 505-345-3975 | 4901 Hawkins N querque, NM 8710 | ^E 9 Samı | ple Log-In Ch | eck List |
|--|--|------------------------------------|---------------------------|---|--|
| Client Name: BLAGG | Work Order Number: | 1706556 | | RcptNo: | 1 |
| Received By: Andy Freeman | 6/10/2017 11:15:00 AM | | and y | | |
| Completed By: Ashley Gallegos | 6/12/2017 8:36:46 AM | | AJ | | |
| Reviewed By: SRC 06/12/1 | 7 | | • | | |
| 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 | | | |
| Log In | | | | | |
| 4. Was an attempt made to cool the samples | ? | Yes 🗹 | No 🗌 | NA 🗔 | |
| 5. Were all samples received at a temperature | e of ≻0° C to 6.0°C | Yes 🗹 | No 🗌 | NA 🗌 | |
| 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) prope | rly 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 brok | en? | Yes | No 🗹 | # of preserved bottles checked | ······································ |
| 12. Does paperwork match bottle labels? | | Yes 🗹 | No 🗌 | for pH: | >12 unless noted) |
| (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of | Custody? | Yes 🗹 | No 🗌 | Adjusted? | The annoos norsay |
| 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) | | | | | |
| 16. Was client notified of all discrepancies with | this order? | Yes 🗌 | No 🗌 | NA 🗹 | |
| Person Notified: | Date | | Landsd2284842384524424487 | | |
| By Whom: | Via: |] eMail 🔲 Pho | ne 🗌 Fax 🛛 | In Person | |
| Regarding: | Sector Contractor Contractor Contractor | | | CONTRACTOR OF THE STATE OF THE STATE OF THE STATE | |
| Client Instructions: 17. Additional remarks: | | · | ÷ 3 | · | |
| | | | | | |
| 18. <u>Cooler Information</u> <u>Cooler No</u> <u>Temp °C</u> <u>Condition</u> <u>Sec</u> 1 2.8 Good Yes | the second s | eal Date Si | gned By | | |
| Page 1 of 1 | | | | | · — |

| Ollevel | | ** ** | orong neoviu | - | ******* | DAY | | | | H | | E | NV | IF | 0 | NN | 1EN | TAL | |
|---------------------------|---|------------|--|---|--------------|---------------------------|------------------|---|--------|--------------------|---------------------|---|------------|-------|-------------|-----------------|----------|--------|-----------------------|
| Client: | BP A | MERICA | | Standard | | | Г | | | | | | | | | | RAT | | |
| E | SiA66 E | NGINEE | rwy Inc. | Project Name | | www.hallenvironmental.com | | | | | | | | | | | | | |
| Mailing | Address: | | | MUDGE LS 6 Project #: | | | | 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Phone #: (505) 320 - 1183 | | | | | | | Analysis Request | | | | | | | | | | | | |
| email or | Fax#: | | | Project Mana | ger: | | (8021) | only) | 6 | | | | (1) | | | | | | Т |
| QA/QC Package: | | | STEVE MUSKAL | | | | as o | / MRO) | | (S) | | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | PCB's | | | | | | |
| Stan | A DO NOT THE OWNER OF THE OWNER OWNER OF THE OWNER OWN | | Level 4 (Full Validation) | Sampler: JEFF BLACK | | | | TPH (Gas | DRO | | SIMS) | | PC. | 32 P | | | | | |
| Accreditation | | | · ···································· | and the second se | | TABLE | TP | 0/0 | £ 5 | 270 | | NON. | 8082 | | - | | | 115 | |
| | | | | On Ice: Yes I No Sample Temperature: 2, 8°C | | | | + | (GRO | 418 | or 8 | sle | NO | les / | | VOA | | | N 2 |
| | (1)00/_ | | | Campio remperature: #19 | | 田田 | MTBE | 58 | thod | 310 | Meta | D. | Pesticides | OA | -iL | A | | ac l | |
| Date | Time | Matrix | Sample Request ID | a second s | Preservative | HEAL No. | + | + × | 80.15B | (Me | s (8 | A 8 | I) SL | Pe | B | (Se | CHLACIDE | | H4 |
| | | | | Type and # | Туре | 1700556 | BTEX | BTE | HdT | TPH (Method 418.1) | PAH's (8310 or 8270 | RCRA 8 Metals | Anioi | 6081 | 8260B (VOA) | 8270 (Semi-VOA) | J | | Air Rithhlad IV AN MI |
| 14/2017 | 1350 | Sol | ZONE 11 | 4 02×1 | COOL | -001 | X | Land | X | | | | | | - | ~ | X | | F |
| 1 | 1359 | 1 | Zone 12 | 1 | 1 | -002 | 1 | | 1 | | | | | | | | 1 | | |
| | 1405 | | Zone 13 | | | -003 | | | | | | | | | - | | | | |
| | 1415 | | Zone 14 | | | -004 | | | | | | | | | | | | | |
| 1 | 1411 | 1 | CREDUE 15 | | | - 005 | 11 | | 1 | | | | | | | | 1 | | |
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| Manufacture of the | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Date: | Time: | Relinquish | ied by: | Received by: | 1 , | Date Time | Re | mark | | ic Bi | | | PLA | | ONTA | IT1 | STEVE | e Masi | KAL. |
| 1/2017 | 1730 | MI | Dlogg | 1-Tull | N | 6/00/17 1115 | w | 35 E | LEH | D: 1 | L1- | DO. | 181 | 2-1 | E:A | 100 | OELS | 6 | |
| Date: | Time: | Ralinquish | lea by: | Beceived by: | | 'Date Time | | | | | | | - | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

June 21, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

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

OrderNo.: 1706A33

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/20/2017 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,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 6/21/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT:Blagg EngineeringProject:MUDGE LS 6Lab ID:1706A33-001 | Client Sample ID: Zone 16 Collection Date: 6/19/2017 9:25:00 AM Matrix: SOIL Received Date: 6/20/2017 7:35:00 AM | | | | | | | |
|--|--|----------|----------|----|-----------------------|-------|--|--|
| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA | | |
| Chloride | ND | 30 | mg/Kg | 20 | 6/20/2017 10:28:38 AM | 32385 | | |
| EPA METHOD 8015M/D: DIESEL RANG | | 5 | | | Analyst | TOM | | |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 6/20/2017 9:49:55 AM | 32384 | | |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 6/20/2017 9:49:55 AM | 32384 | | |
| Surr: DNOP | 102 | 70-130 | %Rec | 1 | 6/20/2017 9:49:55 AM | 32384 | | |
| EPA METHOD 8015D: GASOLINE RAN | GE | | | | Analyst: | NSB | | |
| Gasoline Range Organics (GRO) | ND | 3.6 | mg/Kg | 1 | 6/20/2017 9:37:32 AM | 32371 | | |
| Surr: BFB | 93.2 | 54-150 | %Rec | 1 | 6/20/2017 9:37:32 AM | 32371 | | |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB | | |
| Benzene | ND | 0.018 | mg/Kg | 1 | 6/20/2017 9:37:32 AM | 32371 | | |
| Toluene | ND | 0.036 | mg/Kg | 1 | 6/20/2017 9:37:32 AM | 32371 | | |
| Ethylbenzene | ND | 0.036 | mg/Kg | 1 | 6/20/2017 9:37:32 AM | 32371 | | |
| Xylenes, Total | ND | 0.073 | mg/Kg | 1 | 6/20/2017 9:37:32 AM | 32371 | | |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 1 | 6/20/2017 9:37:32 AM | 32371 | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Date Reported: 6/21/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: Zone 17 Project: MUDGE LS 6 Collection Date: 6/19/2017 9:30:00 AM Lab ID: 1706A33-002 Matrix: SOIL Received Date: 6/20/2017 7:35:00 AM - 1-1 DOT TImid Anal d DED .

| Analyses | Result | PQL Qua | Units | DF | Date Analyzed | Batch |
|------------------------------------|---------|----------|-------|----|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 6/20/2017 10:41:02 AM | 32385 |
| EPA METHOD 8015M/D: DIESEL RANGE O | ORGANIC | S | | | Analyst | TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 6/20/2017 10:14:51 AM | 32384 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 6/20/2017 10:14:51 AM | 32384 |
| Surr: DNOP | 96.7 | 70-130 | %Rec | 1 | 6/20/2017 10:14:51 AM | 32384 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | 4.2 | 4.0 | mg/Kg | 1 | 6/20/2017 10:01:34 AM | 32371 |
| Surr: BFB | 132 | 54-150 | %Rec | 1 | 6/20/2017 10:01:34 AM | 32371 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.020 | mg/Kg | 1 | 6/20/2017 10:01:34 AM | 32371 |
| Toluene | ND | 0.040 | mg/Kg | 1 | 6/20/2017 10:01:34 AM | 32371 |
| Ethylbenzene | ND | 0.040 | mg/Kg | 1 | 6/20/2017 10:01:34 AM | 32371 |
| Xylenes, Total | ND | 0.080 | mg/Kg | 1 | 6/20/2017 10:01:34 AM | 32371 |
| Surr: 4-Bromofluorobenzene | 122 | 66.6-132 | %Rec | 1 | 6/20/2017 10:01:34 AM | 32371 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 2 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

| Analytical Report |
|--------------------------|
| Lab Order 1706A33 |

Date Reported: 6/21/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering | ole ID: Zone 18 | | | | | | | |
|--------------------------------------|-----------------------------|----------|-------------------------------------|---------------------------------------|--|--|--|--|
| Project: MUDGE LS 6 | S 6 Collection Date: 6/19/2 | | | | | | | |
| Lab ID: 1706A33-003 | Matrix: | SOIL | Received Date: 6/20/2017 7:35:00 AM | | | | | |
| | | | | | | | | |
| Analyses | Result | PQL Qual | Units | DF Date Analyzed Batc | | | | |
| Analyses EPA METHOD 300.0: ANIONS | Result | PQL Qual | Units | DF Date Analyzed Bate Analyst: MRA | | | | |

| EPA METHOD 8015M/D: DIESEL RANGE O | RGANIC | s | | | Analyst: | TOM |
|------------------------------------|--------|----------|-------|---|-----------------------|-------|
| Diesel Range Organics (DRO) | 25 | 9.3 | mg/Kg | 1 | 6/20/2017 10:40:21 AM | 32384 |
| Motor Oil Range Organics (MRO) | ND | 47 | mg/Kg | 1 | 6/20/2017 10:40:21 AM | 32384 |
| Surr: DNOP | 107 | 70-130 | %Rec | 1 | 6/20/2017 10:40:21 AM | 32384 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 18 | mg/Kg | 5 | 6/20/2017 10:25:36 AM | 32371 |
| Surr: BFB | 109 | 54-150 | %Rec | 5 | 6/20/2017 10:25:36 AM | 32371 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.092 | mg/Kg | 5 | 6/20/2017 10:25:36 AM | 32371 |
| Toluene | ND | 0.18 | mg/Kg | 5 | 6/20/2017 10:25:36 AM | 32371 |
| Ethylbenzene | ND | 0.18 | mg/Kg | 5 | 6/20/2017 10:25:36 AM | 32371 |
| Xylenes, Total | ND | 0.37 | mg/Kg | 5 | 6/20/2017 10:25:36 AM | 32371 |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 5 | 6/20/2017 10:25:36 AM | 32371 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 3 of 11 |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

| Analytical Report |
|--------------------------|
| Lab Order 1706A33 |
| Date Reported: 6/21/2017 |

Hall Environmental Analysis Laboratory, Inc.

| CLIENT:Blagg EngineeringProject:MUDGE LS 6Lab ID:1706A33-004 | Client Sample ID: Zone 19 Collection Date: 6/19/2017 9:53:00 AM Matrix: SOIL Received Date: 6/20/2017 7:35:00 AM | | | | | | |
|--|--|----------|------------|------------------------|---------|--|--|
| Analyses | Result | PQL | Qual Units | DF Date Analyzed | Batch | | |
| EPA METHOD 300.0: ANIONS | | | | Analy | st: MRA | | |
| Chloride | ND | 30 | mg/Kg | 20 6/20/2017 11:05:52 | M 32385 | | |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | S | | Analy | st: TOM | | |
| Diesel Range Organics (DRO) | ND | 9.3 | mg/Kg | 1 6/20/2017 11:05:18 A | M 32384 | | |
| Motor Oil Range Organics (MRO) | ND | 47 | mg/Kg | 1 6/20/2017 11:05:18 A | M 32384 | | |
| Surr: DNOP | 86.8 | 70-130 | %Rec | 1 6/20/2017 11:05:18 A | M 32384 | | |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | Analy | st: NSB | | |
| Gasoline Range Organics (GRO) | ND | 3.9 | mg/Kg | 1 6/20/2017 10:49:41 A | M 32371 | | |
| Surr: BFB | 99.6 | 54-150 | %Rec | 1 6/20/2017 10:49:41 A | M 32371 | | |
| EPA METHOD 8021B: VOLATILES | | | | Analy | st: NSB | | |
| Benzene | ND | 0.020 | mg/Kg | 1 6/20/2017 10:49:41 A | M 32371 | | |
| Toluene | ND | 0.039 | mg/Kg | 1 6/20/2017 10:49:41 A | M 32371 | | |
| Ethylbenzene | ND | 0.039 | mg/Kg | 1 6/20/2017 10:49:41 A | M 32371 | | |
| Xylenes, Total | ND | 0.079 | mg/Kg | 1 6/20/2017 10:49:41 A | M 32371 | | |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 1 6/20/2017 10:49:41 A | M 32371 | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 4 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

| Analytical Report | |
|-------------------|--|
| Lab Order 1706A33 | |

Date Reported: 6/21/2017

Hall Environmental Analysis Laboratory, Inc.

| | | And in the particular strength of the particular | | | | | | |
|--|--|--|------|----------|-----------|-----------------------|-------|--|
| CLIENT: Blagg Engineering Project: MUDGE LS 6 | Client Sample ID: Zone 20 Collection Date: 6/19/2017 9:58:00 AM | | | | | | | |
| Lab ID: 1706A33-005 | Matrix: | SOIL | | Received | Date: 6/2 | 0/2017 7:35:00 AM | | |
| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch | |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: | MRA | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/20/2017 11:18:17 AM | 32385 | |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANICS | 6 | | | | Analyst: | том | |
| Diesel Range Organics (DRO) | 90 | 9.4 | | mg/Kg | 1 | 6/20/2017 11:30:10 AM | 32384 | |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 6/20/2017 11:30:10 AM | 32384 | |
| Surr: DNOP | 90.7 | 70-130 | | %Rec | 1 | 6/20/2017 11:30:10 AM | 32384 | |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | | | Analyst: | NSB | |
| Gasoline Range Organics (GRO) | 59 | 17 | | mg/Kg | 5 | 6/20/2017 11:13:50 AM | 32371 | |
| Surr: BFB | 192 | 54-150 | S | %Rec | 5 | 6/20/2017 11:13:50 AM | 32371 | |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: | NSB | |
| Benzene | ND | 0.087 | | mg/Kg | 5 | 6/20/2017 11:13:50 AM | 32371 | |
| Toluene | ND | 0.17 | | mg/Kg | 5 | 6/20/2017 11:13:50 AM | 32371 | |
| Ethylbenzene | 0.20 | 0.17 | | mg/Kg | 5 | 6/20/2017 11:13:50 AM | 32371 | |
| Xylenes, Total | 1.3 | 0.35 | | mg/Kg | 5 | 6/20/2017 11:13:50 AM | 32371 | |
| Surr: 4-Bromofluorobenzene | 127 | 66.6-132 | | %Rec | 5 | 6/20/2017 11:13:50 AM | 32371 | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 5 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Date Reported: 6/21/2017

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Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering | | | Client Sempl | a ID: 70 | no 21 | All the second second | | | |
|--|---|----------|--------------|-------------------------------------|-----------------------|-----------------------|--|--|--|
| and the second sec | Client Sample ID: Zone 21 Collection Date: 6/19/2017 10:00:00 AM | | | | | | | | |
| Project: MUDGE LS 6 | | | | | | | | | |
| Lab ID: 1706A33-006 | Matrix: | SOIL | Received 1 | Received Date: 6/20/2017 7:35:00 AM | | | | | |
| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch | | | |
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA | | | |
| Chloride | ND | 30 | mg/Kg | 20 | 6/20/2017 11:30:42 AM | 32385 | | | |
| EPA METHOD 8015M/D: DIESEL RANG | GE ORGANIC | S | | | Analyst | TOM | | | |
| Diesel Range Organics (DRO) | 20 | 9.6 | mg/Kg | 1 | 6/20/2017 12:08:17 PM | 32384 | | | |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 6/20/2017 12:08:17 PM | 32384 | | | |
| Surr: DNOP | 101 | 70-130 | %Rec | 1 | 6/20/2017 12:08:17 PM | 32384 | | | |
| EPA METHOD 8015D: GASOLINE RAN | IGE | | | | Analyst | NSB | | | |
| Gasoline Range Organics (GRO) | ND | 3.8 | mg/Kg | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |
| Surr: BFB | 111 | 54-150 | %Rec | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB | | | |
| Benzene | ND | 0.019 | mg/Kg | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |
| Toluene | ND | 0.038 | mg/Kg | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |
| Ethylbenzene | ND | 0.038 | mg/Kg | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |
| Xylenes, Total | ND | 0.076 | mg/Kg | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |
| Surr: 4-Bromofluorobenzene | 124 | 66.6-132 | %Rec | 1 | 6/20/2017 11:37:54 AM | 32371 | | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 6 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Analytical Report Lab Order 1706A33 Date Reported: 6/21/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: Zone 22 Project: MUDGE LS 6 Collection Date: 6/19/2017 10:03:00 AM Lab ID: 1706A33-007 Matrix: SOIL Received Date: 6/20/2017 7:35:00 AM Analyses Result PQL Qual Units DF Date Analyzed Batch

| EPA METHOD 300.0: ANIONS | | | | | Analyst: | MRA |
|----------------------------------|---------|----------|-------|----|-----------------------|-------|
| Chloride | ND | 30 | mg/Kg | 20 | 6/20/2017 11:43:06 AM | 32385 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | | Analyst: | TOM |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 6/20/2017 11:45:48 AM | 32384 |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 6/20/2017 11:45:48 AM | 32384 |
| Surr: DNOP | 96.9 | 70-130 | %Rec | 1 | 6/20/2017 11:45:48 AM | 32384 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 3.7 | mg/Kg | 1 | 6/20/2017 12:02:02 PM | 32371 |
| Surr: BFB | 105 | 54-150 | %Rec | 1 | 6/20/2017 12:02:02 PM | 32371 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.019 | mg/Kg | 1 | 6/20/2017 12:02:02 PM | 32371 |
| Toluene | ND | 0.037 | mg/Kg | 1 | 6/20/2017 12:02:02 PM | 32371 |
| Ethylbenzene | ND | 0.037 | mg/Kg | 1 | 6/20/2017 12:02:02 PM | 32371 |
| Xylenes, Total | ND | 0.074 | mg/Kg | 1 | 6/20/2017 12:02:02 PM | 32371 |
| Surr: 4-Bromofluorobenzene | 123 | 66.6-132 | %Rec | 1 | 6/20/2017 12:02:02 PM | 32371 |
| | | | | | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|-----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 7 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID MB-32385 | SampType: mblk | TestCode: EPA Method | | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 32385 | RunNo: 43638 | | |
| Prep Date: 6/20/2017 | Analysis Date: 6/20/2017 | SèqNo: 1375850 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-32385 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32385 Client ID: LCSS | SampType: Ics Batch ID: 32385 | TestCode: EPA Method RunNo: 43638 | 300.0: Anions | |
| | 1 31 | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32385 Analysis Date: 6/20/2017 | RunNo: 43638 | | RPDLimit 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

1706A33

21-Jun-17

WO#:

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Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering MUDGE LS 6 **Project:**

| Name of the Owner of the Owne | | | | | | | | | | | |
|--|--------------------------|---------|-----------|---------------------|---|-----------|-----------------------------------|------|----------|------|--|
| Sample ID LCS-32384 | SampT | ype: LC | s | Tes | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | |
| Client ID: LCSS | Batch ID: 32384 | | | F | RunNo: 43630 | | | | | | |
| Prep Date: 6/20/2017 | Analysis Date: 6/20/2017 | | | S | SeqNo: 1374743 Units: mg/Kg | | | (g | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range Organics (DRO) | 43 | 10 | 50.00 | 0 | 86.7 | 73.2 | 114 | | | | |
| Surr: DNOP | 3.9 | | 5.000 | | 77.1 | 70 | 130 | | | | |
| | | | | | | | | | | | |
| Sample ID MB-32384 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | od 8015M/D: Diesel Range Organics | | | | |
| Client ID: PBS | Batch | ID: 32 | 384 | RunNo: 43630 | | | | | | | |
| Prep Date: 6/20/2017 | Analysis Da | ate: 6/ | 20/2017 | 5 | SeqNo: 1 | 374744 | Units: mg/k | g | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | | |
| Surr: DNOP | 9.3 | | 10.00 | | 92.6 | 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
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

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WO#: 21-Jun-17

1706A33

Client: Blagg Engineering Project: MUDGE LS 6

| the second s | | | | | | | | | | |
|--|---------------------|---|----------------|-------------|----------------------|----------------|----------------------------|------------|---------------|------|
| Sample ID MB-32371 | SampT | SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
| Client ID: PBS | Batch | Batch ID: 32371 RunNo: 43647 | | | | | | | | |
| Prep Date: 6/19/2017 | Analysis D | ate: 6/ | 20/2017 | 5 | SeqNo: 1 | 375311 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 940 | | 1000 | | 94.3 | 54 | 150 | | | |
| Sample ID LCS-32371 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | | | |
| Sample ID LCS-32371 | SampT | vne: I C | S | Tes | tCode: El | PA Method | 8015D: Gase | line Rang | e | |
| Sample ID LCS-32371 | | | | | | | 8015D: Gaso | line Rang | e | |
| Sample ID LCS-32371 Client ID: LCSS | | ype: LC | | | tCode: El | | 8015D: Gaso | oline Rang | e | |
| | | ID: 32: | | F | | 3647 | 8015D: Gaso Units: mg/M | | e | |
| Client ID: LCSS | Batch | ID: 32: | 371 20/2017 | F | RunNo: 4 | 3647 | | | e RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/19/2017 | Batch Analysis D | ID: 32: ate: 6/ | 371 20/2017 | F | RunNo: 4 SeqNo: 1 | 3647 375312 | Units: mg/M | (g | | 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

WO#: 1706A33 21-Jun-17

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Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-32371 | SampT | SampType: MBLK TestCode: EPA Metho | | | | | | tiles | | | | |
|----------------------------|------------|------------------------------------|-----------|-------------|-----------|-----------|--------------|-------|----------|------|--|--|
| Client ID: PBS | Batch | ID: 32 | 371 | F | RunNo: 4 | 3647 | | | | | | |
| Prep Date: 6/19/2017 | Analysis D | ate: 6/ | 20/2017 | 5 | SeqNo: 1 | 375343 | Units: mg/Kg | | | | | |
| 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-Bromofluorobenzene | 1.2 | | 1.000 | | 122 | 66.6 | 132 | | | | | |
| Sample ID LCS-32371 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | | | |
| Client ID: LCSS | Batch | ID: 32 | 371 | F | RunNo: 4 | 3647 | | | | | | |
| Prep Date: 6/19/2017 | Analysis D | ate: 6/ | 20/2017 | S | SeqNo: 1 | 375344 | Units: mg/k | g | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 104 | 80 | 120 | | | | | |
| Toluene | 1.1 | 0.050 | 1.000 | 0 | 106 | 80 | 120 | | | | | |
| Ethylbenzene | 1.1 | 0.050 | 1.000 | 0 | 107 | 80 | 120 | | | | | |
| Xylenes, Total | 3.3 | 0.10 | 3.000 | 0 | 109 | 80 | 120 | | | | | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 125 | 66.6 | 132 | | | | | |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Η 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
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 21-Jun-17

1706A33

| HALL ENVIRONMENTA ANALYSIS LABORATORY | NL TEL: \$05-345-3 | ntal Analysis Laborator 4901 Hawkins N Albuquerque, NM 8710 1975 FAX: 505-345-410 w.hallenvironmental.co | ¹⁶ ¹⁹ Sam | ple Log-In Cheo | k List |
|--|--|--|------------------------------------|--|---------------|
| Client Name: BLAGG | Work Order Num | ber: 1706A33 | | RcptNo: 1 | |
| Received By: Anne Thor Completed By: Anne Thor Reviewed By: ENM | | АМ | Arre H- Arre H- | | |
| Chain of Custody 1. Custody seals intact on sa 2. Is Chain of Custody comp 3. How was the sample delived | lete? | Yes □ Yes ☑ <u>Courier</u> | No 🗌 No 🗌 | Not Present Vot Present | |
| 4. Was an attempt made to | cool the samples? | Yes 🔽 | No 🗌 | | |
| Were all samples received Sample(s) in proper conta | at a temperature of >0° C to 6.0°C | Yes 🗹 | No 🗌 | NA 🗆 | |
| 7, Sufficient sample volume | | Yes ✔ Yes ✔ | | | |
| 9. Was preservative added to | | Yes | No 🗹 | NA 🗆 | |
| 10.VOA vials have zero head 11. Were any sample contain 12. Does paperwork match bo | ers received broken? | Yes □ Yes □ Yes ☑ | No 🗌 No 🗹 | No VOA Vials # of preserved bottles checked for pH: | |
| (Note discrepancies on ch 13. Are matrices correctly ider 14. Is it clear what analyses w | ain of custody) tified on Chain of Custody? | Yes ⊻ Yes ⊻ | | | unless noted) |
| 15. Were all holding times able (If no, notify customer for a | e to be met? | Yes 🗹 | No 🗌 | Checked by: | |
| Special Handling (if app | | | | | |
| 16. Was client notified of all di Person Notified: By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C 1 1.1 | Condition Seal Intact Seal No Good Yes | eMail Pho | No Proceedings | NA 🗹 | |
| Page 1 of 1 | | | | | |

| Chain-of-Custody Record Client: BP AMERICA BLAGG ENGINEERING INC. Mailing Address: | | | | Turn-Around Time: DAK DAK DAK Project Name: MUDGE LS 6 Project #: | | | HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 | | | | | | | | | | | | | |
|---|---|------------|-------------------|---|----------------------|-------------------------------|---|------------------------------|---|--------------------|--------------------|---------------------|---------------|---------------|------------------------------|-------------|-----------------|-----------------|---------|----------------------|
| Phone # | t: (50: | 5) 320 | -1183 | | | | | | | | | - | alysi | is R | Requ | lest | | 1 | | |
| email or | Fax#: | | | Project Mana | ger: | | - | nly) | 30) | | | | Ĩ | 1+2 | | | | Construction of | | |
| Stan | QA/QC Package: Standard Level 4 (Full Validation Accreditation | | | JTEN | e Maska | 5 | TMB's (8021) | (Gas or | RO / MI | | 1 | SIMS) | | 101101 | 2 PCB's | | | | | |
| D NEL | AP | Othe | r | On Ice: | KYes | No No | 4 | HdT + | SRO / DI | 418.1) | 504.1) | or 8270 | S NO | CONI'ECH | es / 808 | | (MO | | | Or N) |
| Date | (Type) | Matrix | Sample Request ID | Sample Temp Arcul/Will Container Type and # McoHkb | Preservative Type | HEAL NO. | BTEX + MEBE | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 | RCRA 8 Metals | WINDLE (L'OIN | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLOKIDE | | Air Bubbles (Y or N) |
| 5/19/2017 | 0925 | SOIL | ZONE 16 | 40221 | Looc | 00 | X | | X | | | | | | | | | X | | |
| | 0930 | | ZONE 17 | | 1 | 702 | 1 | | 1 | | | | | | | | | | | |
| | 0935 | | ZONE 18 | | | 203 | | | 1 | | | | | | | | | | | |
| | 0953 | | ZONE 19 | | | 204 | | | | | | | | | | | | | | |
| | 0958 | | ZONE ZO | | | 205 | | | | | | | | | | | 4 | | | |
| | 1000 | | ZONE 21 | | | -206 | | | | | | | | | | | | | | |
| | 1003 | | ZONE 22 | 1 | | -767 | 1 | | And the second se | | | | | | | | | - | | |
| | - | | | | | | | | | | | _ | | _ | | | | | | |
| | | | | | | | | | | | | | | + | | | | | 1 | |
| | | | | | | | | | | | | | | | | | | - | | |
| | Time: 1206 Time: 1839 | Relinguish | Blagg | Received by: | In A | Date Time 06/20/17 0755 | ω | BS i | VE | U BI | VHU | | | 218 | 8M | -6 | : 1 | Mua | -56 | |

L

APPENDIX C

Treated Soil - Laboratory Analytical Data Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

May 25, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1705C33

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/24/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:Blagg EngineeringProject:MUDGE LS 6Lab ID:1705C33-001

Client Sample ID: TSP-1 Collection Date: 5/23/2017 9:26:00 AM Received Date: 5/24/2017 7:15:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|----------|----------|----|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 10:34:13 AM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | s | | | Analyst | TOM |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 5/24/2017 9:54:58 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 5/24/2017 9:54:58 AM | 31930 |
| Surr: DNOP | 83.6 | 70-130 | %Rec | 1 | 5/24/2017 9:54:58 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.3 | mg/Kg | 1 | 5/24/2017 8:58:33 AM | 31921 |
| Surr: BFB | 98.8 | 54-150 | %Rec | 1 | 5/24/2017 8:58:33 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.021 | mg/Kg | 1 | 5/24/2017 8:58:33 AM | 31921 |
| Toluene | ND | 0.043 | mg/Kg | 1 | 5/24/2017 8:58:33 AM | 31921 |
| Ethylbenzene | ND | 0.043 | mg/Kg | 1 | 5/24/2017 8:58:33 AM | 31921 |
| Xylenes, Total | ND | 0.085 | mg/Kg | 1 | 5/24/2017 8:58:33 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 117 | 66.6-132 | %Rec | 1 | 5/24/2017 8:58:33 AM | 31921 |

Matrix: SOIL

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

Analytical Report

Lab Order 1705C33

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: | Blagg Engineering | | |
|-----------------|-------------------|---------|------|
| Project: | MUDGE LS 6 | | |
| Lab ID: | 1705C33-002 | Matrix: | SOIL |

Client Sample ID: TSP-2 Collection Date: 5/23/2017 9:30:00 AM Received Date: 5/24/2017 7:15:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|---------------------------------|-----------|----------|----------|----|-----------------------|---------|
| EPA METHOD 300.0: ANIONS | | | | | Analys | t: LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 10:46:38 AM | 1 31936 |
| EPA METHOD 8015M/D: DIESEL RANG | E ORGANIC | S | | | Analys | t: TOM |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 5/24/2017 8:59:55 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 | 5/24/2017 8:59:55 AM | 31930 |
| Surr: DNOP | 99.5 | 70-130 | %Rec | 1 | 5/24/2017 8:59:55 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | GE | | | | Analyst | : NSB |
| Gasoline Range Organics (GRO) | ND | 3.4 | mg/Kg | 1 | 5/24/2017 9:22:28 AM | 31921 |
| Surr: BFB | 98.9 | 54-150 | %Rec | 1 | 5/24/2017 9:22:28 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.017 | mg/Kg | 1 | 5/24/2017 9:22:28 AM | 31921 |
| Toluene | ND | 0.034 | mg/Kg | 1 | 5/24/2017 9:22:28 AM | 31921 |
| Ethylbenzene | ND | 0.034 | mg/Kg | 1 | 5/24/2017 9:22:28 AM | 31921 |
| Xylenes, Total | ND | 0.069 | mg/Kg | 1 | 5/24/2017 9:22:28 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 115 | 66.6-132 | %Rec | 1 | 5/24/2017 9:22:28 AM | 31921 |

| * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|----|---|--|---|
| D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 2 of 11 |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | ND | D Sample Diluted Due to Matrix H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits | DSample Diluted Due to MatrixEHHolding times for preparation or analysis exceededJNDNot Detected at the Reporting LimitPRRPD outside accepted recovery limitsRL |

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | DOI | 01 | Units | DF Date Analyzed | Ba |
|----------|-------------------|---------|------|----|------------|----------------------------|----|
| Lab ID: | 1705C33-003 | Matrix: | SOIL | | Received | Date: 5/24/2017 7:15:00 AM | |
| Project: | MUDGE LS 6 | | | | Collection | Date: 5/23/2017 9:34:00 AM | |
| CLIENT: | Blagg Engineering | | | C | lient Samp | ole ID: TSP-3 | |

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|----------|----------|----|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 10:59:02 AM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | | Analyst: | TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 5/24/2017 9:21:56 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/24/2017 9:21:56 AM | 31930 |
| Surr: DNOP | 98.3 | 70-130 | %Rec | 1 | 5/24/2017 9:21:56 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANGI | E | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 3.4 | mg/Kg | 1 | 5/24/2017 9:46:27 AM | 31921 |
| Surr: BFB | 102 | 54-150 | %Rec | 1 | 5/24/2017 9:46:27 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.017 | mg/Kg | 1 | 5/24/2017 9:46:27 AM | 31921 |
| Toluene | ND | 0.034 | mg/Kg | 1 | 5/24/2017 9:46:27 AM | 31921 |
| Ethylbenzene | ND | 0.034 | mg/Kg | 1 | 5/24/2017 9:46:27 AM | 31921 |
| Xylenes, Total | ND | 0.068 | mg/Kg | 1 | 5/24/2017 9:46:27 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 120 | 66.6-132 | %Rec | 1 | 5/24/2017 9:46:27 AM | 31921 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 3 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Analytical Report

Lab Order 1705C33

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | PQL Qual | Units | DF Date Analyzed | Batch |
|-----------------|-------------------|---------|----------|-------------|----------------------------|-------|
| Lab ID: | 1705C33-004 | Matrix: | SOIL | Received | Date: 5/24/2017 7:15:00 AM | |
| Project: | MUDGE LS 6 | | | Collection | Date: 5/23/2017 9:38:00 AM | |
| CLIENT: | Blagg Engineering | | (| Client Samp | ole ID: TSP-4 | |

| 1 kildi j 505 | Result | r dr dr | ur onus | <i>D</i> 1 | Dute Mulyzed | Duten |
|---------------------------------|--------|----------|---------|------------|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 11:11:27 AM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANG | | S | | | Analyst | том |
| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 5/24/2017 9:44:06 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/24/2017 9:44:06 AM | 31930 |
| Surr: DNOP | 100 | 70-130 | %Rec | 1 | 5/24/2017 9:44:06 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | θE | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 3.3 | mg/Kg | 1 | 5/24/2017 10:10:25 AM | 31921 |
| Surr: BFB | 97.5 | 54-150 | %Rec | 1 | 5/24/2017 10:10:25 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.016 | mg/Kg | 1 | 5/24/2017 10:10:25 AM | 31921 |
| Toluene | ND | 0.033 | mg/Kg | 1 | 5/24/2017 10:10:25 AM | 31921 |
| Ethylbenzene | ND | 0.033 | mg/Kg | 1 | 5/24/2017 10:10:25 AM | 31921 |
| Xylenes, Total | ND | 0.065 | mg/Kg | 1 | 5/24/2017 10:10:25 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 115 | 66.6-132 | %Rec | 1 | 5/24/2017 10:10:25 AM | 31921 |
| | | | | | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 4 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Blagg Engineering
 Client Sample ID: TSP-5

 Project: MUDGE LS 6
 Collection Date: 5/23/2017 9:41:00 AM

 Lab ID: 1705C33-005
 Matrix: SOIL
 Received Date: 5/24/2017 7:15:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|----------|----------|----|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 11:23:52 AM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | | Analyst | том |
| Diesel Range Organics (DRO) | 14 | 9.6 | mg/Kg | 1 | 5/24/2017 10:06:28 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/24/2017 10:06:28 AM | 31930 |
| Surr: DNOP | 99.5 | 70-130 | %Rec | 1 | 5/24/2017 10:06:28 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 20 | mg/Kg | 5 | 5/24/2017 10:34:16 AM | 31921 |
| Surr: BFB | 103 | 54-150 | %Rec | 5 | 5/24/2017 10:34:16 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.098 | mg/Kg | 5 | 5/24/2017 10:34:16 AM | 31921 |
| Toluene | ND | 0.20 | mg/Kg | 5 | 5/24/2017 10:34:16 AM | 31921 |
| Ethylbenzene | ND | 0.20 | mg/Kg | 5 | 5/24/2017 10:34:16 AM | 31921 |
| Xylenes, Total | ND | 0.39 | mg/Kg | 5 | 5/24/2017 10:34:16 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 123 | 66.6-132 | %Rec | 5 | 5/24/2017 10:34:16 AM | 31921 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 5 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: TSP-6 Project: MUDGE LS 6 Collection Date: 5/23/2017 9:44:00 AM Lab ID: 1705C33-006 Matrix: SOIL Received Date: 5/24/2017 7:15:00 AM Analyses Result PQL Qual Units DF Date Analyzed Batch

| | CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE | the second s | Statement of the local division of the local | No. of Concession, Name | the second s | A DECEMBER OF A |
|---------------------------------|---|--|--|-------------------------|--|---|
| EPA METHOD 300.0: ANIONS | | | | | Analyst: | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 11:36:16 AM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANG | E ORGANIC | S | | | Analyst: | TOM |
| Diesel Range Organics (DRO) | ND | 9.5 | mg/Kg | 1 | 5/24/2017 10:28:39 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/24/2017 10:28:39 AM | 31930 |
| Surr: DNOP | 99.0 | 70-130 | %Rec | 1 | 5/24/2017 10:28:39 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | GE | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 3.4 | mg/Kg | 1 | 5/24/2017 10:58:07 AM | 31921 |
| Surr: BFB | 102 | 54-150 | %Rec | 1 | 5/24/2017 10:58:07 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.017 | mg/Kg | 1 | 5/24/2017 10:58:07 AM | 31921 |
| Toluene | ND | 0.034 | mg/Kg | 1 | 5/24/2017 10:58:07 AM | 31921 |
| Ethylbenzene | ND | 0.034 | mg/Kg | 1 | 5/24/2017 10:58:07 AM | 31921 |
| Xylenes, Total | ND | 0.069 | mg/Kg | 1 | 5/24/2017 10:58:07 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 1 | 5/24/2017 10:58:07 AM | 31921 |
| | | | | | | |

| * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|----|---|--|---|
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 6 of 11 |
| ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | ND R | D Sample Diluted Due to Matrix H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits | DSample Diluted Due to MatrixEHHolding times for preparation or analysis exceededJNDNot Detected at the Reporting LimitPRRPD outside accepted recovery limitsRL |

Date Reported: 5/25/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Project: MUDGE LS 6

1705C33-007

Lab ID:

Client Sample ID: TSP-7 Collection Date: 5/23/2017 9:47:00 AM Received Date: 5/24/2017 7:15:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|----------|----------|----|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | LGT |
| Chloride | ND | 30 | mg/Kg | 20 | 5/24/2017 11:48:41 AM | 31936 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | 6 | | | Analyst | : TOM |
| Diesel Range Organics (DRO) | ND | 9.7 | mg/Kg | 1 | 5/24/2017 10:50:44 AM | 31930 |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 5/24/2017 10:50:44 AM | 31930 |
| Surr: DNOP | 99.6 | 70-130 | %Rec | 1 | 5/24/2017 10:50:44 AM | 31930 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 3.5 | mg/Kg | 1 | 5/24/2017 11:22:08 AM | 31921 |
| Surr: BFB | 103 | 54-150 | %Rec | 1 | 5/24/2017 11:22:08 AM | 31921 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.018 | mg/Kg | 1 | 5/24/2017 11:22:08 AM | 31921 |
| Toluene | ND | 0.035 | mg/Kg | 1 | 5/24/2017 11:22:08 AM | 31921 |
| Ethylbenzene | ND | 0.035 | mg/Kg | 1 | 5/24/2017 11:22:08 AM | 31921 |
| Xylenes, Total | ND | 0.070 | mg/Kg | 1 | 5/24/2017 11:22:08 AM | 31921 |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 1 | 5/24/2017 11:22:08 AM | 31921 |

Matrix: SOIL

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 7 of 11 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID MB-31936 | SampType: MBLK | 300.0: Anions | | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 31936 | RunNo: 43028 | | |
| Prep Date: 5/24/2017 | Analysis Date: 5/24/2017 | SeqNo: 1355112 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-31936 | SampType: LCS | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-31936 Client ID: LCSS | SampType: LCS Batch ID: 31936 | TestCode: EPA Method RunNo: 43028 | 300.0: Anions | |
| | | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 31936 Analysis Date: 5/24/2017 | RunNo: 43028 | | RPDLimit 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
- R RPD outside accepted recovery limits
- 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

itation range

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25-May-17

WO#: 1705C33

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

| the second se | | | | | | | the second s | | | |
|---|---|---------|-----------|-------------|---------------------|-----------|--|-----------|------------|------|
| Sample ID LCS-31930 | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | | |
| Client ID: LCSS | Batch | ID: 31 | 930 | F | RunNo: 43020 | | | | | |
| Prep Date: 5/24/2017 | Analysis D | ate: 5/ | 24/2017 | `S | SeqNo: 1 | 353919 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 42 | 10 | 50.00 | 0 | 84.2 | 73.2 | 114 | | | |
| Surr: DNOP | 4.5 | | 5.000 | | 89.2 | 70 | 130 | | | |
| Sample ID MB-31930 | SampT | ype: ME | BLK | Tes | Code: El | PA Method | 8015M/D: Die | esel Rang | e Organics | |
| Client ID: PBS | Batch | ID: 31 | 930 | R | unNo: 4 | 3020 | | | | |
| Prep Date: 5/24/2017 | Analysis D | ate: 5/ | 24/2017 | S | eqNo: 1 | 353920 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 9.7 | | 10.00 | | 97.2 | 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
- R RPD outside accepted recovery limits
- 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

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WO#: 1705C33 25-May-17

| | Blagg Engineering MUDGE LS 6 | | | | | | | | |
|-------------------------|---------------------------------|-----------|-----------|----------------|-----------|--------------|-------------|------------|----------|
| Sample ID MB-319 | 21 Samp | Гуре: МЕ | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Range | 9 |
| Client ID: PBS | Batc | h ID: 319 | 921 | F | unNo: 4 | 3026 | | | |
| Prep Date: 5/23/20 | 5/23/2017 Analysis Da | | 24/2017 | SeqNo: 1354470 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit |
| Gasoline Range Organics | (GRO) ND | 5.0 | | | | | | | |

Hall Environmental Analysis Laboratory, Inc.

| Surr: BFB | iganice (errey | 980 | 0.0 | 1000 | | 97.8 | 54 | 150 | | | | |
|-----------------------|----------------|--------------------------|---------|-----------|--|----------|----------|--------------|------|----------|------|--|
| Sample ID LC | CS-31921 | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LC | SS | Batch ID: 31921 | | | RunNo: 43026 | | | | | | | |
| Prep Date: 5/ | 5/23/2017 | Analysis Date: 5/24/2017 | | | 5 | SeqNo: 1 | 354471 | Units: mg/Kg | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Gasoline Range Org | rganics (GRO) | 23 | 5.0 | 25.00 | 0 | 93.8 | 76.4 | 125 | | | | |
| Surr: BFB | | 1100 | | 1000 | | 106 | 54 | 150 | | | | |
| Sample ID RB | 3 | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PB | 35 | Batch ID: G43026 | | | RunNo: 43026 | | | | | | | |
| Prep Date: | | Analysis Date: 5/24/2017 | | | SeqNo: 1354482 | | | Units: %Rec | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Surr: BFB | | 990 | | 1000 | | 99.1 | 54 | 150 | | | | |
| Sample ID 2.5 | 5UG GRO LCS | SampT | ype: LC | s | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LC: | SS | Batch ID: G43026 | | | RunNo: 43026 | | | | | | | |
| | | Analysis Date: 5/24/2017 | | | SeqNo: 1354483 | | | Units: %Rec | | | | |
| Prep Date: | | Analysis D | ate: 5/ | 24/2017 | 5 | equo. 1 | 354483 | Units. /arec | | | | |
| Prep Date: Analyte | | Analysis D Result | PQL | | SPK Ref Val | | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |

Qualifiers:

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

25-May-17

Qual

WO#:

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1705C33

Client: Blagg Engineering

Project: MUDGE LS 6

| Sample ID MB-31921 | Samp | Гуре: МЕ | BLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | |
|----------------------------|--------------------------|----------|-----------|---------------------------------------|----------|----------|--------------|------|----------|------|--|
| Client ID: PBS | Batc | h ID: 31 | 921 | RunNo: 43026 | | | | | | | |
| Prep Date: 5/23/2017 | Analysis Date: 5/24/2017 | | | SeqNo: 1354496 | | | Units: mg/Kg | | | | |
| 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-Bromofluorobenzene | 1.2 | | 1.000 | | 117 | 66.6 | 132 | | | | |
| Sample ID LCS-31921 | SampT | Type: LC | S | TestCode: EPA Method 8021B: Volatiles | | | | | | | |
| Client ID: LCSS | Batch ID: 31921 | | | F | RunNo: 4 | 3026 | | | | | |
| Prep Date: 5/23/2017 | Analysis Date: 5/24/2017 | | | S | SeqNo: 1 | 354497 | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 100 | 80 | 120 | | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 103 | 80 | 120 | | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 104 | 80 | 120 | | | | |
| Xylenes, Total | 3.2 | 0.10 | 3.000 | 0 | 106 | 80 | 120 | | | | |
| Surr: 4-Bromofluorobenzene | 1.3 | | 1.000 | | 127 | 66.6 | 132 | | | | |
| Sample ID RB | SampT | уре: МВ | ILK | Test | Code: EF | | | | | | |
| Client ID: PBS | Batch ID: B43026 | | | R | unNo: 4 | | | | | | |
| Prep Date: | Analysis Date: 5/24/2017 | | | S | eqNo: 1 | 354508 | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 115 | 66.6 | 132 | | | | |
| Sample ID 100NG BTEX LCS | SampT | ype: LC | S | TestCode: EPA Method 8021B: Volatiles | | | | | | | |
| Client ID: LCSS | Batch ID: B43026 | | | RunNo: 43026 | | | | | | | |
| Prep Date: | Analysis D | ate: 5/2 | 24/2017 | SeqNo: 1354509 Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 116 | 66.6 | 132 | | | | |

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
- R RPD outside accepted recovery limits
- 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

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WO#: 1705C33

25-May-17

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental . Albu TEL: 505-345-3975 Website: www.hal | 490) Iquerqu FAX: 2 | l Hawkins NE ue, NM 87109 505-345-4107 | Sa | mple | Log-in C | heck List |
|--|---|---------------------------|--|------------------|-------------|------------------------------|-------------------|
| Client Name: BLAGG | Work Order Number: | 1705 | C33 | | | RcptNo: | 1 |
| Received By: Anne Thome Completed By: Anne Thome Reviewed By: Anne Thome Chain of Custody | 5/24/2017 7:15:00 AM 5/24/2017 7:43:34 AM 5 (24 1/7 | | 2 | Anne K Anne K | % % | | |
| 1. Custody seals intact on sample bottle | es? | Yes | | No | | ot Present 🗹 | |
| 2. Is Chain of Custody complete? | | Yes | \checkmark | No [|] N | ot Present | |
| 3. How was the sample delivered? | | Cou | rier | | | | |
| Log In | | | _ | | - | | |
| Was an attempt made to cool the sa | mples? | Yes | \checkmark | No | | NA 🗌 | |
| 5. Were all samples received at a temp | erature of >0° C to 6.0°C | Yes | | No 🗌 | | na 🗆 | , |
| 6. Sample(s) in proper container(s)? | | Yes | \checkmark | No |] | | |
| Sufficient sample volume for indicate Are samples (except VOA and ONG) | | Yes Yes | > | | | | |
| 9. Was preservative added to bottles? | property preserver | Yes | | No 🗹 | | NA 🗆 | |
| 10. VOA vials have zero headspace? | | Yes | | No 🗌 | No | VOA Vials | |
| 11. Were any sample containers receive | d broken? | Yes | | No 🗹 | | preserved | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custo | | Yes | | No | bott for | les checked oH: (<2 or | >12 unless noted) |
| 13. Are matrices correctly identified on Cl | - | Yes | | No | | Adjusted? | |
| 14. Is it clear what analyses were request | | Yes | | No [| | 0 | |
| Were all holding times able to be met (If no, notify customer for authorization) | | Yes | \checkmark | No | | Checked by: | |
| Special Handling (If applicable) | | | | | | | |
| 16. Was client notified of all discrepancies | s with this order? | Yes | | No | | NA 🗹 | |
| Person Notified: By Whom: Regarding: | Date Via: |] eMa | il 🗌 Phon | e 🗌 Fa | x 🗌 In | Person | |

17. Additional remarks:

Client Instructions:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.3 | Good | Yes | | | |

Page 1 of 1

| Client: | hain- BP A | of-Cu Merica | stody Record | Turn-Around | Rush | Same Dav | | | | | | | | | | | | | NT | | | |
|------------------------------|--|--------------------------|---|------------------------------------|----------------------|---|------------------|-------------|------------------|--------------------|--------------------|----------------|----------------------|--|------------------------------|-------------|-----------------|----------|-----------|-----------------------|----------------------|--|
|] | SLA66 | ENGI | NEERING | Project Name | ee ls | 6 | | | | , | www | /.hall | env | ironr | nent | al.co | m | | | | | |
| Mailing | Address: | | | Project #: | | <u>e</u> | | | - | awki | | | | | | | | | | | | |
| | 1000 | 1770 | 1107 | | | | - | Те | 1. 50 | 5-34 | 5-39 | | - | | | | 4107 | 7 | | | | |
| Phone # | Phone #: (505) 320- 1183 email or Fax#: | | Project Mana | der: | | | 2 | Ô | 1 | | | nary | | Req | uest | | | | | | | |
| QA/QC Package: | | 1 | BLAGE | | 021) | luos | MRG | | | | | SO. | B's | | | | | | | | | |
| Stan | - | | Level 4 (Full Validation) | J. LUND | | | | \$ (8(| (Gas | DRO / MRO) | | | SIMS) | | PO4 | PC | | | | | | |
| Accredit | | | _ | | Sampler: J- BLA66 | | ampler: J. BLAG6 | | ID! | ÷. | = | 8270 5 | | NO2 | 8082 | | | | | | Î | |
| | | | r | On Ice Contraction Clinics Clinics | | 1 11 | + | GRC | 418 | 504 | | sle | NO ₃ , | es / | | (VOA) | W | | | Y or | | |
| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | | BTEX + WHBE | BTEX + MTBE | TPH 8015B (GRO / | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or | RCRA 8 Metals | Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | Air Bubbles (Y or N) | |
| \$23/2017 | 0926 | Soll | TSP-1 | 402×1 | Cool | -70 | X | | X | | | | | | | | | X | | | | |
| 1 | 0930 | | TSP-2 | 1 | | 502 | 1 | | 1 | | | | | | | | | 1 | | | | |
| | 0934 | | TSP-3 | | | TB | | | | | | | | | | | | | | | | |
| | 0938 | | T3P-4 | | | 704 | | | | | | | · | | | | | | | | | |
| | 0941 | | TSP-S | | | 715 | | | | | | | | . • | 1.1 | | • | | | | | |
| | 0944 | | TSP-6 | | | 105 | | • | | | | | | | | | | | | · | | |
| 1 | 0947 | 1 | TSP-7 | 1 | 1 | 1007 | | | 1 | | | | | | | | | 1 | | | | |
| | | | | | | | - | - | | | | | | | | | | | | + | | |
| | | | | | | | + | | - | | | | | - | | - | | - | \vdash | + | | |
| | | | | | | | - | - | | | | | - | \vdash | | - | - | | \vdash | + | + | |
| P | | | | | | | | | | | | | | | | | | | | + | | |
| 5/23/2017 Date: 5/23/7 | 191D | Relinquish Relfhquish | L Blogg Hotere Waller | Received by: | alt . | Date Time 5/23/7 /520 Date Time 05/24/17 07/5 | - UL SA | uple | ELE | Jul Jost | t: ed | L1 | - C | EVR 20 Hz(| M 18)z | M- | ·E; | MV | e Mo | 56 Elsi | | |
| I | f necessary, | saniples sub | mitted to Hall Environmental may be sub | contracted to other a | ccredited laboratori | es. This serves as notice of th | le poss | ibility. | Any s | ub-con | tracte | d data | will b | e clea | rly not | ated o | n the a | analytic | al report | Ł | | |



May 26, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

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

OrderNo.: 1705C78

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/25/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Lab Order 1705C78

Date Reported: 5/26/2017

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | PQL Qu | al Units | DF Date Analyzed | Batch |
|-----------------|-------------------|---------|--------|------------|------------------------------|-------|
| Lab ID: | 1705C78-001 | Matrix: | SOIL | Received | d Date: 5/25/2017 7:10:00 AM | |
| Project: | MUDGE LS 6 | | | Collection | n Date: 5/24/2017 1:57:00 PM | |
| CLIENT: | Blagg Engineering | | | Client Sam | ple ID: TSP-8 | |

| EPA METHOD 300.0: ANIONS | | | | Analyst: MRA | _ |
|----------------------------------|---------|----------|--------|--------------------------------|---|
| Chloride | ND | 30 | mg/Kg | 20 5/25/2017 10:48:12 AM 31974 | |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 15 | 10 | mg/Kg | 1 5/25/2017 9:58:44 AM 31956 | |
| Motor Oil Range Organics (MRO) | ND | 50 | mg/Kg | 1 5/25/2017 9:58:44 AM 31956 | |
| Surr: DNOP | 83.5 | 70-130 | %Rec | 1 5/25/2017 9:58:44 AM 31956 | |
| EPA METHOD 8015D: GASOLINE RANGE | E | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 12 | 3.8 | mg/Kg | 1 5/25/2017 10:25:55 AM G4306 | 5 |
| Surr: BFB | 262 | 54-150 | S %Rec | 1 5/25/2017 10:25:55 AM G4306 | 5 |
| EPA METHOD 8021B: VOLATILES | | | | Analyst: NSB | |
| Benzene | ND | 0.019 | mg/Kg | 1 5/25/2017 10:25:55 AM B43065 | 5 |
| Toluene | ND | 0.038 | mg/Kg | 1 5/25/2017 10:25:55 AM B43065 | 5 |
| Ethylbenzene | ND | 0.038 | mg/Kg | 1 5/25/2017 10:25:55 AM B43065 | 5 |
| Xylenes, Total | 0.12 | 0.076 | mg/Kg | 1 5/25/2017 10:25:55 AM B43065 | 5 |
| Surr: 4-Bromofluorobenzene | 101 | 66.6-132 | %Rec | 1 5/25/2017 10:25:55 AM B43065 | 5 |

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
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 7 J
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Analytical Report Lab Order 1705C78 Date Reported: 5/26/2017

5/25/2017 10:49:25 AM B43065

5/25/2017 10:49:25 AM B43065

5/25/2017 10:49:25 AM B43065

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: TSP-9

CLIENT: Blagg Engineering **Project:** MUDGE LS 6 Lab ID:

Analyses

Chloride

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluor

Collection Date: 5/24/2017 2:02:00 PM

1

1

1

Received Date: 5/25/2017 7:10:00 AM 1705C78-002 Matrix: SOIL Result PQL Qual Units **DF** Date Analyzed Batch EPA METHOD 300.0: ANIONS Analyst: MRA ND 30 mg/Kg 5/25/2017 11:00:37 AM 31974 20 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) 19 9.5 mg/Kg 5/25/2017 10:27:03 AM 31956 1 Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 5/25/2017 10:27:03 AM 31956 Surr: DNOP 88.0 70-130 %Rec 1 5/25/2017 10:27:03 AM 31956 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 11 3.6 mg/Kg 1 5/25/2017 10:49:25 AM G43065 5/25/2017 10:49:25 AM G43065 Surr: BFB 277 54-150 S %Rec 1 Analyst: NSB **EPA METHOD 8021B: VOLATILES** ND 0.018 5/25/2017 10:49:25 AM B43065 Benzene mg/Kg 1

| probenzene | 102 | 66.6-132 | %Rec | 1 | 5/25/2017 10:49:25 AM | B43065 |
|------------|-----|----------|------|---|-----------------------|--------|
| | | | | | | |
| | | | | | | |
| | | | | | | |

0.036

0.036

0.071

mg/Kg

mg/Kg

mg/Kg

ND

ND

0.081

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 2 of 7 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | | | |

Analytical Report

Lab Order 1705C78

Date Reported: 5/26/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: | Blagg Engineering | | Client Sample ID: TSP-10 |
|-----------------|-------------------|--------------|---------------------------------------|
| Project: | MUDGE LS 6 | | Collection Date: 5/24/2017 2:04:00 PM |
| Lab ID: | 1705C78-003 | Matrix: SOIL | Received Date: 5/25/2017 7:10:00 AM |
| | | | |

| Analyses | Result | PQL Q | Qual Units | DF | Date Analyzed | Batch |
|----------------------------------|--------|----------|------------|---------|-----------------------|--------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 5/25/2017 11:13:01 AM | 31974 |
| EPA METHOD 8015M/D: DIESEL RANGE | ; | | | Analyst | TOM | |
| Diesel Range Organics (DRO) | 40 | 9.4 | mg/Kg | 1 | 5/25/2017 10:55:23 AM | 31956 |
| Motor Oil Range Organics (MRO) | 66 | 47 | mg/Kg | 1 | 5/25/2017 10:55:23 AM | 31956 |
| Surr: DNOP | 89.2 | 70-130 | %Rec | 1 | 5/25/2017 10:55:23 AM | 31956 |
| EPA METHOD 8015D: GASOLINE RANGE | Ξ | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | 18 | 3.9 | mg/Kg | 1 | 5/25/2017 11:12:58 AM | G43065 |
| Surr: BFB | 345 | 54-150 | S %Rec | 1 | 5/25/2017 11:12:58 AM | G43065 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.019 | mg/Kg | 1 | 5/25/2017 11:12:58 AM | B43065 |
| Toluene | ND | 0.039 | mg/Kg | 1 | 5/25/2017 11:12:58 AM | B43065 |
| Ethylbenzene | ND | 0.039 | mg/Kg | 1 | 5/25/2017 11:12:58 AM | B43065 |
| Xylenes, Total | 0.095 | 0.078 | mg/Kg | 1 | 5/25/2017 11:12:58 AM | B43065 |
| Surr: 4-Bromofluorobenzene | 106 | 66.6-132 | %Rec | 1 | 5/25/2017 11:12:58 AM | B43065 |

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

| Qual | ifiers: |
|------|---------|
|------|---------|

- * 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
- R RPD outside accepted recovery limits
- 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 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID MB-31974 | SampType: MBLK | TestCode: EPA Method | 300.0: Anions | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 31974 | RunNo: 43067 | | |
| Prep Date: 5/25/2017 | Analysis Date: 5/25/2017 | SeqNo: 1355858 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-31974 | SampType: LCS | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-31974 Client ID: LCSS | SampType: LCS Batch ID: 31974 | TestCode: EPA Method RunNo: 43067 | 300.0: Anions | |
| | 1 31 | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 31974 Analysis Date: 5/25/2017 | RunNo: 43067 | | RPDLimit 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
- R RPD outside accepted recovery limits
- 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

WO#: 1705C78 26-May-17

e associated Method Blan

- Page 4 of 7

WO#: 1705C78

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26-May-17

| | Engineering GE LS 6 | |
|--|--------------------------|--|
| Sample ID LCS-31943 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 31943 | RunNo: 43051 |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354741 Units: %Rec |
| Analyte | Result PQL SPK value | e SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Surr: DNOP | 4.8 5.000 | 95.2 70 130 |
| Sample ID MB-31943 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 31943 | RunNo: 43051 |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354742 Units: %Rec |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Surr: DNOP | 9.6 10.00 | 96.1 70 130 |
| Sample ID LCS-31956 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 31956 | RunNo: 43052 |
| Prep Date: 5/25/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354925 Units: mg/Kg |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 46 10 50.00 | |
| Surr: DNOP | 4.3 5.000 | 85.7 70 130 |
| Sample ID MB-31956 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 31956 | RunNo: 43052 |
| Prep Date: 5/25/2017 | Analysis Date: 5/25/2017 | SeqNo: 1354926 Units: mg/Kg |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | ND 10 | |
| Motor Oil Range Organics (MRO) Surr: DNOP | ND 50 8.1 10.00 | 81.3 70 130 |
| | | |
| Sample ID LCS-31932 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 31932 | RunNo: 43051 |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1355829 Units: %Rec |
| Analyte | | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Surr: DNOP | 4.5 5.000 | 89.3 70 130 |
| Sample ID MB-31932 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 31932 | RunNo: 43051 |
| Prep Date: 5/24/2017 | Analysis Date: 5/25/2017 | SeqNo: 1355830 Units: %Rec |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Surr: DNOP | 9.4 10.00 | 94.4 70 130 |

Qualifiers:

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

QC SUMMARY REPORT

Client:Blagg EngineeringProject:MUDGE LS 6

| | | | | | | | the second se | | | |
|--|------------------------------|------------------------------------|----------------------|-------------|-----------------------------------|-----------------------------|---|-----------|---------------|------|
| Sample ID RB | SampT | SampType: MBLK TestCode: EPA Metho | | | | | 8015D: Gaso | line Rang | e | |
| Client ID: PBS | Batch | Batch ID: G43065 RunNo: 43065 | | | | | | | | |
| Prep Date: | Analysis D | ate: 5/ | 25/2017 | S | SeqNo: 1 | 355625 | Units: mg/M | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 920 | | 1000 | | 92.3 | 54 | 150 | | | |
| Sun Br B | 520 | | 1000 | | 92.5 | 54 | 150 | | | |
| Sample ID 2.5UG GRO LCS | | ype: LC | | Tes | | | 8015D: Gaso | line Rang | 9 | |
| | SampT | ype: LC | s | | | PA Method | | line Rang | 9 | |
| Sample ID 2.5UG GRO LCS | SampT | D: G4 | s | F | tCode: El | PA Method 3065 | | Ū | e | |
| Sample ID 2.5UG GRO LCS Client ID: LCSS | SampT Batch | D: G4 | S 3065 25/2017 | F | tCode: El RunNo: 4 | PA Method 3065 | 8015D: Gaso | Ū | e RPDLimit | Qual |
| Sample ID 2.5UG GRO LCS Client ID: LCSS Prep Date: | SampT Batch Analysis D | n ID: G4 ate: 5/ | S 3065 25/2017 | F | tCode: El RunNo: 4 SeqNo: 1 | PA Method 3065 355626 | 8015D: Gaso Units: mg/K | íg | | 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
- R RPD outside accepted recovery limits
- 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

1705C78 26-May-17

WO#:

Page 6 of 7

Client: Blagg Engineering **Project:** MUDGE LS 6

| Name and a state of the state o | | | | | | | | | and the second se | |
|--|-------------------------------------|-------------------------------|----------------|-------------|--------------|--------------|--------------|------|---|------|
| Sample ID RB | SampType: MBLK TestCode: EPA Method | | | | | 8021B: Volat | tiles | | | |
| Client ID: PBS | Batc | Batch ID: B43065 RunNo: 43065 | | | | | | | | |
| Prep Date: | Analysis I | Date: 5/ | 25/2017 | S | SeqNo: 1 | 355634 | 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-Bromofluorobenzene | 0.91 | | 1.000 | | 90.7 | 66.6 | 132 | | | |
| Sample ID 100NG BTEX LCS | Sampl | ype: LC | S | Test | Code: El | PA Method | 8021B: Volat | iles | | |
| Client ID: LCSS | Batch | h ID: B4 | 3065 | R | unNo: 4 | 3065 | | | | |
| Prep Date: | Analysis D | Date: 5/ | 25/2017 | S | eqNo: 1 | 355635 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | | | | | | | | | | |
| Benzene | 0.85 | 0.025 | 1.000 | 0 | 85.3 | 80 | 120 | | | |
| Benzene Toluene | 0.85 0.90 | 0.025 0.050 | 1.000 1.000 | 0 0 | 85.3 89.6 | 80 80 | 120 120 | | | |
| | | | | | | | | | | |
| Toluene | 0.90 | 0.050 | 1.000 | 0 | 89.6 | 80 | 120 | | | |
| Toluene Ethylbenzene | 0.90 0.92 | 0.050 0.050 | 1.000 1.000 | 0 | 89.6 92.0 | 80 80 | 120 120 | | | |

Qualifiers:

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

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WO#: 1705C78 26-May-17

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental . Albu TEL: 505-345-3975 . Website: www.hai | 4901 querqu FAX: 5 | Hawkins NE 1e, NM 87109 505-345-4107 | s S | am | ple Log-In Check List |
|---|---|--------------------------|--|---------------------|--------------|--|
| Client Name: BLAGG | Work Order Number: | 1705 | C78 | | | ReptNo: 1 |
| | | | | | | |
| Received By: Anne Thome | 5/25/2017 7:10:00 AM | | | Anne , Anne , | Am | ~ |
| Completed By: Anne Thome | 5/25/2017 7:52:14 AM | | | Ann. | 1 | - |
| Reviewed By: | 5/25/17 | | | | | |
| 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? | | Cour | rler | | | |
| <u>Log In</u> | | | | | | |
| 4. Was an attempt made to cool the samples' | ? | Yes | | No | | |
| 5. Were all samples received at a temperature | e 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 | \checkmark | No | | |
| 8. Are samples (except VOA and ONG) proper | rly preserved? | Yes | \checkmark | No | | |
| 9. Was preservative added to bottles? | | Yes | | No | \checkmark | NA 🗌 |
| 10.VOA vials have zero headspace? | | Yes | | No | | No VOA Vials |
| 11. Were any sample containers received broke | en? | Yes | | No | | H of averaged |
| | | | | | | # of preserved bottles checked |
| 12. Does paperwork match bottle labels? | | Yes | \checkmark | No | | for pH: (<2 or >12 unless noted) |
| (Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of | Custody2 | Yes | | No | | Adjusted? |
| 14. Is it clear what analyses were requested? | Gustody | Yes | | No | | |
| 15. Were all holding times able to be met? | | | | No | | Checked by: |
| (If no, notify customer for authorization.) | | | | | L | |
| Special Handling (if applicable) | | | | | | |
| 16. Was client notified of all discrepancies with | this order? | Yes | | No | | NA 🗹 |
| Person Notified: | Date | Colling Parts | | | annander. | |
| By Whom: | Via: | eMa | il 🗌 Phon | ne 🗌 | Fax | In Person |
| Regarding: | | and the second second | | allow, of ground to | | Second And California Colonia and Annual |
| Client Instructions: | | | | | | |
| 17. Additional remarks: | | | | | | |
| 18. Cooler Information | | | | | | |

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |

Page 1 of 1

| Client: | | or-Cu | stody Record | Turn-Around | | SAME DAY | | | | H | A | L | EN | VI | R | DNI | ME | NT | AL | L |
|----------|----------|---------------|---------------------------------------|--|----------------------|---|----|----------------------------|-----------------------------|-------------------------------|--------------------|---------------------|---------------|---|-----------------------------|-----------------|---------|-----|-----|------|
| | BPAV | HERICA | | □ Standard | | Manual of Constant of Const | | | | A | NA | AL) | 15 | IS | LA | BO | RA | TC | R | Y |
| | BLAGE | - ENGU | NEERING INC | Project Name | | | | | | , | www. | .halle | nvir | onme | ental. | com | | | | |
| Mailing | Address: | | | MUDG | e ls (| 2 | | 49 | 01 H | awki | ns NI | E - / | Albu | quero | que, | NM 8 | 7109 | | | |
| | | | | Project #: | | | | Т | el. 50 | 505-345-3975 Fax 505-345-4107 | | | | | | | | | | |
| Phone # | # (50 | <u>5) 328</u> | 0-1183 | | | | | | | | | An | alys | is Re | eque | st | | | | |
| email or | Fax#: | | · · · · · · · · · · · · · · · · · · · | Project Mana | ger: | | | | RO) | | | | 1 | . 04) | | | | | | |
| | Package: | | | STEVE | MOSKAL | | | 802 as o | / WI | | | (S) | | 24,0 | n | | | | | |
| Stang | | | Level 4 (Full Validation) | | | | | | RO | | | SIMS) | | | I. | | | | | |
| Accredit | | D. Other | · | Sampler: J | EFF BLAI | 66 10 No | | <u>+ TPH (Gas only)</u> | SO / D | 18.1) | 04.1) | 8270 | | 03,NO | 1 808 | (A) | | | | 1. |
| | (Type) | | | Sample Tem | (a) | | | | (GF | 4 b | 5 pc | Dor | tals | N'N | Ides | 2 3 | DE | | | 1 |
| Date | Time | Matrix | Sample Request ID | Kroc 2517 Container Type and # Mcotf Ccts | Preservative Type | HEALNO | | BTEX + MTBE BTEX + MTBE | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 | RCRA 8 Metals | Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PUBS | 8270 (Semi-VOA) | CHLOUNE | | | |
| hali | 1357 | SOLL | TSP-B | 402×1 | COOL | | | x | X | | - | | | - | | | X | | 1 | |
| 1 | 1402 | | TSP-9 | 1 | 1 | | | x | X | | | | | | | | X | | | |
| | 1404 | | TSP-10 | | | 1 | | × | × | | | + | | | | | × | | | + |
| | | | | | | | | | | | | | | | | | | | | 1 |
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| | | | | | | | | _ | | | | _ | | | | | - | | _ | |
| | | | | | | | | | - | | | _ | _ | - | _ | _ | | | - | |
| Date: | Time: | Relinguishe | ad hv: | Received by: | | Date Time | | Remar | | 77 | | | | | | | | | | |
| 24/17 | 1640 | file | Blogg | Christie | Walt | = 5/24/n 14 | 40 | (1)75 | | BILL VID: | VI | lixo | | VRM | 1 | Aer: | | VE. | Mos | skal |
| Date: | Time: | Refinquish | at Daltes | Received by: | In It | Daté Time 1 05/25/17 07/ | 0 | Saul | ber - | HENT | : L | -1- | 00. Hu | 18M U.C | 1-E | Mu | GEL | S 6 | é | |



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

May 31, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: Mudge LS 6

OrderNo.: 1705D55

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/26/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Lab Order 1705D55

Date Reported: 5/31/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: | Blagg Engineering |
|-----------------|-------------------|
| Project: | Mudge LS 6 |
| Lab ID: | 1705D55-001 |

Client Sample ID: TSP-10R Collection Date: 5/25/2017 3:03:00 PM Matrix: MEOH (SOIL) Received Date: 5/26/2017 7:50:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|----------|----------|----|-----------------------|--------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst: | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 5/26/2017 10:38:59 AM | 31989 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | | Analyst: | том |
| Diesel Range Organics (DRO) | 38 | 9.5 | mg/Kg | 1 | 5/26/2017 9:46:23 AM | 31984 |
| Motor Oil Range Organics (MRO) | 86 | 47 | mg/Kg | 1 | 5/26/2017 9:46:23 AM | 31984 |
| Surr: DNOP | 87.0 | 70-130 | %Rec | 1 | 5/26/2017 9:46:23 AM | 31984 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 3.9 | mg/Kg | 1 | 5/26/2017 11:46:03 AM | R43104 |
| Surr: BFB | 107 | 54-150 | %Rec | 1 | 5/26/2017 11:46:03 AM | R43104 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.019 | mg/Kg | 1 | 5/26/2017 11:46:03 AM | B43104 |
| Toluene | ND | 0.039 | mg/Kg | 1 | 5/26/2017 11:46:03 AM | B43104 |
| Ethylbenzene | ND | 0.039 | mg/Kg | 1 | 5/26/2017 11:46:03 AM | B43104 |
| Xylenes, Total | ND | 0.077 | mg/Kg | 1 | 5/26/2017 11:46:03 AM | B43104 |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 1 | 5/26/2017 11:46:03 AM | B43104 |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|---|--|----|---|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 6 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S % Recovery outside of range due to dilution or matrix | | W | Sample container temperature is out of limit as specified |
| | | | | |

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

Lab Order 1705D55

Date Reported: 5/31/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: | Blagg Engineering | Client Sample ID: |
|-----------------|-------------------|------------------------------------|
| Project: | Mudge LS 6 | Collection Date: |
| Lab ID: | 1705D55-002 | Matrix: MEOH (SOIL) Received Date: |

: TSP 11 to 15 : 5/25/2017 2:44:00 PM : 5/26/2017 7:50:00 AM

| Analyses | Result | PQL Qu | al Units | DF | Date Analyzed | Batch |
|----------------------------------|---------|----------|----------|----|-----------------------|--------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 5/26/2017 10:51:24 AM | 31989 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | 5 | | | Analyst | том |
| Diesel Range Organics (DRO) | 12 | 9.6 | mg/Kg | 1 | 5/26/2017 10:14:28 AM | 31984 |
| Motor Oil Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 5/26/2017 10:14:28 AM | 31984 |
| Surr: DNOP | 86.3 | 70-130 | %Rec | 1 | 5/26/2017 10:14:28 AM | 31984 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 3.8 | mg/Kg | 1 | 5/26/2017 12:09:57 PM | R43104 |
| Surr: BFB | 114 | 54-150 | %Rec | 1 | 5/26/2017 12:09:57 PM | R43104 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.019 | mg/Kg | 1 | 5/26/2017 12:09:57 PM | B43104 |
| Toluene | ND | 0.038 | mg/Kg | 1 | 5/26/2017 12:09:57 PM | B43104 |
| Ethylbenzene | ND | 0.038 | mg/Kg | 1 | 5/26/2017 12:09:57 PM | B43104 |
| Xylenes, Total | ND | 0.076 | mg/Kg | 1 | 5/26/2017 12:09:57 PM | B43104 |
| Surr: 4-Bromofluorobenzene | 125 | 66.6-132 | %Rec | 1 | 5/26/2017 12:09:57 PM | B43104 |

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

Qualifiers:

*

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 6 J
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

| Hall Environmental | Analysis | Laborat | tory, Inc. |
|--------------------|----------|---------|------------|
|--------------------|----------|---------|------------|

Client: Blagg Engineering **Project:** Mudge LS 6

| | | Testo de ERAN de | | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Sample ID MB-31989 | SampType: MBLK | TestCode: EPA Method | 300.0: Anions | |
| Client ID: PBS | Batch ID: 31989 | RunNo: 43101 | | |
| Prep Date: 5/26/2017 ` | Analysis Date: 5/26/2017 | SeqNo: 1356922 | Units: mg/Kg | |
| Analyte | Result PQL SPK valu | e SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-31989 | SampType: LCS | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-31989 Client ID: LCSS | SampType: LCS Batch ID: 31989 | TestCode: EPA Method RunNo: 43101 | 300.0: Anions | |
| | 1 31 | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 31989 Analysis Date: 5/26/2017 | RunNo: 43101 | | RPDLimit Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % 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
- Ρ Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W

- Page 3 of 6

31-May-17

Client:Blagg EngineeringProject:Mudge LS 6

| Sample ID LCS-31984 | SampT | ype: LC | s | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
|--------------------------------|------------|----------|-----------|-------------|-----------|-----------|-------------|-----------|------------|------|
| Client ID: LCSS | Batch | n ID: 31 | 984 | F | RunNo: 4 | 3088 | | | | |
| Prep Date: 5/26/2017 | Analysis D | ate: 5/ | 26/2017 | S | SeqNo: 1 | 356258 | Units: mg/k | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 40 | 10 | 50.00 | 0 | 79.4 | 73.2 | 114 | | | |
| Surr: DNOP | 4.4 | | 5.000 | | 87.8 | 70 | 130 | | | |
| Sample ID MB-31984 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
| Client ID: PBS | Batch | ID: 31 | 984 | F | RunNo: 4 | 3088 | | | | |
| Prep Date: 5/26/2017 | Analysis D | ate: 5/ | 26/2017 | S | eqNo: 1 | 356259 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | | | 10.00 | | | = - | 100 | | | |
| Juli. Divol | 9.3 | | 10.00 | | 93.3 | 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
- R RPD outside accepted recovery limits
- 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

a quantitation range

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31-May-17

WO#: 1705D55

Client: Blagg Engineering **Project:** Mudge LS 6

| | | | | and the second se | and the second se | | | | | |
|-------------------------------|------------|---------------|-----------|---|---|-----------|-------------|-----------|----------|------|
| Sample ID 2.5UG GRO LCS | SampT | ype: LC | s | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | е | |
| Client ID: LCSS | Batch | 1D: R4 | 3104 | F | RunNo: 4 | 3104 | | | | |
| Prep Date: | Analysis D | ate: 5/ | 26/2017 | 5 | SeqNo: 1 | 356843 | Units: mg/M | g | × | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 96.4 | 76.4 | 125 | | | |
| Surr: BFB | 1100 | | 1000 | | 112 | 54 | 150 | | | |
| Sample ID RB | SampT | ype: ME | BLK | Tes | tCode: El | A Method | 8015D: Gaso | line Rang | e | |
| Client ID: PBS | Batch | ID: R4 | 3104 | F | unNo: 4 | 3104 | | | | |
| Prep Date: | Analysis D | ate: 5/ | 26/2017 | S | eqNo: 1 | 356846 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| | | | | | | | | | | |

Qualifiers:

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

Page 5 of 6

31-May-17

Client:Blagg EngineeringProject:Mudge LS 6

| Sample ID 100NG BTEX LCS | Samp1 | Type: LC | s | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
|----------------------------|------------|-----------------|-----------|-------------|-----------|-----------|--------------|-------|----------|------|
| Client ID: LCSS | Batcl | h ID: B4 | 3104 | F | RunNo: 4 | 3104 | | | | |
| Prep Date: | Analysis E | Date: 5/ | 26/2017 | S | SeqNo: 1 | 356851 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 103 | 80 | 120 | | | |
| Xylenes, Total | 3.1 | 0.10 | 3.000 | 0 | 104 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 123 | 66.6 | 132 | | | |
| Sample ID RB | SampT | уре: МЕ | BLK | Tes | tCode: El | PA Method | 8021B: Volat | tiles | | |
| Client ID: PBS | Batch | 1 ID: B4 | 3104 | F | RunNo: 4 | 3104 | | | | |
| Prep Date: | Analysis D | ate: 5/ | 26/2017 | S | eqNo: 1 | 356874 | 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-Bromofluorobenzene | 1.2 | | 1.000 | | 117 | 66.6 | 132 | | | |

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
- R RPD outside accepted recovery limits
- 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 6

31-May-17

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental Albu TEL: 505-345-3975 Website: www.hal | 4901 Hawkin querque, NM 8 FAX: 505-345- | AT 109 Sam | nple Log-In C | heck List |
|---|---|---|---|---|---------------------|
| Client Name: BLAGG | Work Order Number: | 1705D55 | | RcptNo: | 1 |
| Received By: Andy Jansson | 5/26/2017 7:50:00 AM | | ma | | |
| Completed By: Andy Jansson | 5/26/2017 8:22:10 AM | | waar | | |
| Reviewed By: | 5126117 | | | | |
| 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 | | | |
| Log In | | | | | |
| 4. Was an attempt made to cool the samples? | | Yes 🗹 | No 🗌 | NA 🗌 | |
| 5. Were all samples received at a temperature of | f >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) properly | 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 broken | ? | Yes | No 🗹 | # of preserved bottles checked | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes 🗹 | No 🗌 | for pH: | r >12 unless noted) |
| 13. Are matrices correctly identified on Chain of C | ustody? | Yes 🗹 | No 🗆 | Adjusted? | |
| 4, 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: | |
| pecial Handling (if applicable) | | | | | |
| 16. Was client notified of all discrepancies with this | s order? | Yes 🗆 | No 🗌 | NA 🗹 | |
| Person Notified: By Whom: | Date Via: | eMail 🗌 I | Phone 🗍 Fax | In Person | |
| Regarding: | | | | | |
| Client Instructions: | *************************************** | | MANARES MORE BOARD AND AND AND AND AND AND AND AND AND AN | <u>, , , , , , , , , , , , , , , , , , , </u> | |
| 7. Additional remarks: | | | | | |
| 8. <u>Cooler Information</u> | e els inclusiones el | | | | |
| Cooler No Temp °C Condition Seal 1 1.0 Good Yes | Intact Seal No Se | eal Date | Signed By | | |
| | | | | | |

| Client: BP America Blazz Engineery Mailing Address: Phone #: (505) \$ 320 - 1183 | Turn-Around Time: SAME DAT Project Name: Mudge LS b Project #: | HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request |
|--|--|--|
| email or Fax#: QA/QC Package: Standard □ Level 4 (Full Validation Accreditation □ NELAP □ Other □ EDD (Type) Date Time: Matrix Sample Request ID | Sampler: Street Blg7 On Ice: Stres DNo Sample Temperature: 1.0°C | BTEX ± MTBE + TPH (Gas only) BTEX + MTBE + TPH (Gas only) TPH 8015B (GRO / DRO / MRO) TPH (Method 418.1) EDB (Method 504.1) PAH'S (8310 or 8270 SIMS) RCRA 8 Metals Anions (F, CI, NO ₃ , NO ₂ , PO ₄ , SO ₄) 8081 Pesticides / 8082 PCB's 8260B (VOA) 8270 (Semi-VOA) RZTO (Semi-VOA) Air Ruthhes (Y or N) |
| 5/25/17 1503 SOIL TSP-IOR 11 1444 "TSP 11 to 15 | 406~1 care -001 11 4 -002 | |
| Date: Time: Relinquished by: 925/67 1616 Juff Blay | Received by: HT have Time 15/17 1616 | Remarks: Bill BP Contracts Stove Mostal VID: VHIXWEVRM |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

May 31, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: Mudge LS 6

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

OrderNo.: 1705E48

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/27/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Lab Order 1705E48

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/31/2017

| Analyses | | Result | PQL | Qual U | Units | DF Date Analyzed | Batch |
|-----------------|-------------------|---------|------|--------|-----------|-----------------------------|-------|
| Lab ID: | 1705E48-001 | Matrix: | SOIL |] | Received | Date: 5/27/2017 10:00:00 AM | |
| Project: | Mudge LS 6 | | | С | ollection | Date: 5/26/2017 1:10:00 PM | |
| CLIENT | Blagg Engineering | | | Cli | ent Samp | ole ID: TSP-10R2 | |

| | A NOD GAND | - 2 | | ~~ | 2 | |
|----------------------------------|------------|----------|--------|----|-----------------------|-------|
| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 5/30/2017 10:47:57 AM | 32013 |
| EPA METHOD 8015M/D: DIESEL RANGE | | 6 | | | Analyst | TOM |
| Diesel Range Organics (DRO) | 18 | 9.4 | mg/Kg | 1 | 5/30/2017 9:42:32 AM | 32008 |
| Motor Oil Range Organics (MRO) | ND | 47 | mg/Kg | 1 | 5/30/2017 9:42:32 AM | 32008 |
| Surr: DNOP | 89.7 | 70-130 | %Rec | 1 | 5/30/2017 9:42:32 AM | 32008 |
| EPA METHOD 8015D: GASOLINE RANG | Ε | | | | Analyst | RAA |
| Gasoline Range Organics (GRO) | 4.9 | 3.4 | mg/Kg | 1 | 5/30/2017 10:29:24 AM | 31995 |
| Surr: BFB | 196 | 54-150 | S %Rec | 1 | 5/30/2017 10:29:24 AM | 31995 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | RAA |
| Benzene | ND | 0.017 | mg/Kg | 1 | 5/30/2017 10:29:24 AM | 31995 |
| Toluene | ND | 0.034 | mg/Kg | 1 | 5/30/2017 10:29:24 AM | 31995 |
| Ethylbenzene | ND | 0.034 | mg/Kg | 1 | 5/30/2017 10:29:24 AM | 31995 |
| Xylenes, Total | ND | 0.067 | mg/Kg | 1 | 5/30/2017 10:29:24 AM | 31995 |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 1 | 5/30/2017 10:29:24 AM | 31995 |
| | | | | | | |

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
- R RPD outside accepted recovery limits
- K KFD outside accepted recovery mints
- 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 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client: Blagg Engineering Project: Mudge LS 6

-

| Sample ID MB-32013 | SampType: MBLK | TestCode: EPA Method | 300.0: Anions | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 32013 | RunNo: 43126 | | |
| Prep Date: 5/30/2017 | Analysis Date: 5/30/2017 | SeqNo: 1358362 | Units: mg/Kg | <i>x</i> |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-32013 | SampType: LCS | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32013 Client ID: LCSS | SampType: LCS Batch ID: 32013 | TestCode: EPA Method RunNo: 43126 | 300.0: Anions | |
| | | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32013 Analysis Date: 5/30/2017 | RunNo: 43126 | | RPDLimit 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
- R RPD outside accepted recovery limits
- 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

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WO#: 1705E48 31-May-17

IARY REPORT

QC SUMMARY REPORT

| Hall Environmental Analysis Laboratory, I | ronmental Analysis Laboratory | , Inc |
|---|-------------------------------|-------|
|---|-------------------------------|-------|

Client: Blagg Engineering Project: Mudge LS 6

| Sample ID LCS-32008 | SampType: LCS | Tes | tCode: EPA Method | 8015M/D: Diesel Ra | ange Organics |
|--------------------------------|------------------------|---------------------|-------------------|--------------------|------------------|
| Client ID: LCSS | Batch ID: 32008 | F | RunNo: 43123 | | |
| Prep Date: 5/30/2017 | Analysis Date: 5/30/2 | 017 5 | SeqNo: 1357223 | Units: mg/Kg | |
| Analyte | Result PQL SP | K value SPK Ref Val | %REC LowLimit | HighLimit %RF | PD RPDLimit Qual |
| Diesel Range Organics (DRO) | 43 10 | 50.00 0 | 85.6 73.2 | 114 | |
| Surr: DNOP | 4.5 | 5.000 | 90.7 70 | 130 | |
| Sample ID MB-32008 | SampType: MBLK | Tes | Code: EPA Method | 8015M/D: Diesel Ra | ange Organics |
| Client ID: PBS | Batch ID: 32008 | F | unNo: 43123 | | |
| Prep Date: 5/30/2017 | Analysis Date: 5/30/2 | 017 S | eqNo: 1357224 | Units: mg/Kg | |
| Analyte | Result PQL SPI | K value SPK Ref Val | %REC LowLimit | HighLimit %RP | PD RPDLimit Qual |
| Diesel Range Organics (DRO) | ND 10 | | | | |
| Motor Oil Range Organics (MRO) | ND 50 | | | | |
| Surr: DNOP | 9.3 | 10.00 | 93.3 70 | 130 | |
| Sample ID LCS-32000 | SampType: LCS | Tes | Code: EPA Method | 8015M/D: Diesel Ra | ange Organics |
| Client ID: LCSS | Batch ID: 32000 | F | unNo: 43123 | | |
| Prep Date: 5/26/2017 | Analysis Date: 5/30/20 | 017 S | eqNo: 1357843 | Units: %Rec | |
| Analyte | Result PQL SPI | K value SPK Ref Val | %REC LowLimit | HighLimit %RP | D RPDLimit Qual |
| Surr: DNOP | 3.8 | 5.000 | 76.2 70 | 130 | |
| Sample ID MB-32000 | SampType: MBLK | Test | Code: EPA Method | 8015M/D: Diesel Ra | inge Organics |
| Client ID: PBS | Batch ID: 32000 | R | unNo: 43123 | | |
| Prep Date: 5/26/2017 | Analysis Date: 5/30/20 | 017 S | eqNo: 1357844 | Units: %Rec | |
| Analyte | Result PQL SPF | K value SPK Ref Val | %REC LowLimit | HighLimit %RP | D RPDLimit Qual |
| Surr: DNOP | 8.3 | 10.00 | 83.0 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
- R RPD outside accepted recovery limits
- 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

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WO#: 1705E48 31-May-17

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** Mudge LS 6

| Sample ID LCS-31995 | SampType: LCS TestCode: EPA Method | | | | POIED: Coor | line Bang | 0 | | | |
|---|------------------------------------|---------|----------------|--|----------------------|----------------|----------------------------|------------|---------------|------|
| Sample ID LCS-31995 | Sampi | ype. Lo | 5 | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: LCSS | Batch ID: 31995 | | | F | RunNo: 43124 | | | | | |
| Prep Date: 5/26/2017 | Analysis D | ate: 5/ | 30/2017 | 5 | SeqNo: 1 | 357367 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 103 | 76.4 | 125 | | | |
| Surr: BFB | 1000 | | 1000 | | 102 | 54 | 150 | | | |
| | | | | | | | | | | |
| Sample ID MB-31995 | SampT | уре: МЕ | BLK | Tes | tCode: El | PA Method | 8015D: Gasc | line Rang | e | |
| Sample ID MB-31995 Client ID: PBS | | ype: ME | | | tCode: El | | 8015D: Gasc | oline Rang | e | |
| | | 1D: 319 | | F | | 3124 | 8015D: Gasc Units: mg/K | | e | |
| Client ID: PBS | Batch | 1D: 319 | 995 30/2017 | F | aunNo: 4 | 3124 | | | e RPDLimit | Qual |
| Client ID: PBS Prep Date: 5/26/2017 | Batch Analysis D | ID: 319 | 995 30/2017 | F | RunNo: 4 SeqNo: 1 | 3124 357368 | Units: mg/K | íg | | Qual |

Qualifiers:

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

1705E48

31-May-17

WO#:

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Client: Blagg Engineering Project: Mudge LS 6

| the second | | | | | | | | | | |
|---|------------|-----------------|-----------|-------------|-----------|-----------|-------------|-------|----------|------|
| Sample ID LCS-31995 | SampT | Type: LC | s | Tes | tCode: El | | | | | |
| Client ID: LCSS | Batch | Batch ID: 31995 | | | RunNo: 4 | | | | | |
| Prep Date: 5/26/2017 | Analysis D | Date: 5/ | 30/2017 | S | SeqNo: 1 | 357378 | Units: mg/k | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 101 | 80 | 120 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Xylenes, Total | 3.1 | 0.10 | 3.000 | 0 | 104 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 116 | 66.6 | 132 | | | |
| Sample ID MB-31995 | SampT | уре: МЕ | BLK | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: PBS | Batch | n ID: 31 | 995 | F | RunNo: 4 | 3124 | | | | |
| Prep Date: 5/26/2017 | Analysis D | ate: 5/ | 30/2017 | S | eqNo: 1 | 357379 | 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 | | | | | | | | |
| | | | | | | | | | | |

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
- R RPD outside accepted recovery limits
- 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

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| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental . Albu TEL: 505-345-3975 Website: www.hai | 4901 querque FAX: 50 | Hawkins NE 2, NM 87109 05-345-4107 | Sam | ple Log-In C | heck List |
|--|---|----------------------------|---|---|-------------------------------------|----------------------|
| Client Name: BLAGG | Work Order Number: | 1705E | 48 | | RcptNo: | 1 |
| Received By: Andy Freeman | 5/27/2017 10:00:00 AM | 1 | . 4 | and you | - | |
| Completed By: Anne Thorne | 5/30/2017 7:53:11 AM | | 6 | Tome How | | |
| Reviewed By: | 5/30/17 | | | | | |
| Chain of Custody | | | | | | |
| 1. Custody seals intact on sample bottles? | | | | No 🗌 | Not Present | |
| 2. Is Chain of Custody complete? | | Yes | \checkmark | No 🗌 | Not Present | |
| 3. How was the sample delivered? | | Couri | er | | | |
| Log In 4. Was an attempt made to cool the samples | ? | Yes | | No 🗌 | NA 🗔 | |
| 5. Were all samples received at a temperature | e 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) property | rly preserved? | Yes | \checkmark | 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 broke | en? | Yes | | No 🗹 | # of preserved | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes | \checkmark | No 🗌 | bottles checked for pH: (<2 c | or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of | Custody? | Yes | Image: A start of the start of | No 🗌 | Adjusted? | |
| 14. Is it clear what analyses were requested? | | | | No 🗌 | Oha daad kaa | |
| Were all holding times able to be met? (If no, notify customer for authorization.) | | Yes | | No 🗌 | Checked by: | |
| Special Handling (if applicable) | | | | | | |
| 16. Was client notified of all discrepancies with | this order? | Yes | | No 🗆 | NA 🗹 | |
| Person Notified: | Date | and an and an and an an | NUMBER AND A DESCRIPTION OF | and the second secon | | |
| By Whom: | Via: | eMai | Phone | Fax | In Person | |
| Regarding: | | | | | | |
| Client Instructions: | | | | | | |
| 17. Additional remarks: | | | | | | |

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.8 | Good | Yes | | | |

Date: Client: Br Annerica Date: EDD (Type) QA/QC Package: email or Fax#: Phone #: O NELAP Accreditation Standard Mailing Address: Date 5 Chain-of-Custody Record If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report BLAGE Engineery Time: Ime: 1633 Time 1236 Soil 1310 - 022 (505) Relinquished by: Relinquished by 7105 Matrix] Other Level 4 (Full Validation) Impact Grub C-22 TSP-10R2 Sample Request ID 15 legg 10 I urn-Around Time: Project Manager: Project #: Project Name: Received by: Samplestemperature Ondes States Sampler: JER Black Received by: Type and # □ Standard Container 4 03-1 Mudge LS 6 1 Steve Moska Preservative Туре **X**Rush 6000 2 5/27/17 10:00 Date Date SAL SAL Time Time 20 202 Remarks: B)((BP CONS VID: VH(XONEVEN X BTEX + MTBE * TMB's (8021) BTEX + MTBE + TPH (Gas only) 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 × WBS: L1-001BM-E: Mudgels6 TPH 8015B (GRO / DRO / MRO) TPH (Method 418.1) ANALYSIS LABORATORY HALL ENVIRONMENTAL www.hallenvironmental.com EDB (Method 504.1) PAH's (8310 or 8270 SIMS) Analysis Request **RCRA 8 Metals** Fax 505-345-4107 Anions (F,Cl,NO3,NO2,PO4,SO4) Contect: Steve Mostal 8081 Pesticides / 8082 PCB's 8260B (VOA) 8270 (Semi-VOA) C ovide Air Bubbles (Y or N)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

June 05, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

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

OrderNo.: 1706002

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/1/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1706002

Date Reported: 6/5/2017

Hall Environmental Analysis Laboratory, Inc.

| | | | | | | and the second | | | | | |
|--------------------------------|--------------|--|------|------------------------------------|-----------|--|--------|--|--|--|--|
| CLIENT: Blagg Engineering | | | C | lient Samp | le ID: TS | P-16 | | | | | |
| Project: MUDGE LS 6 | | Collection Date: 5/31/2017 3:32:00 PM | | | | | | | | | |
| Lab ID: 1706002-002 | Matrix: SOIL | | | Received Date: 6/1/2017 7:20:00 AM | | | | | | | |
| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch | | | | |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst | MRA | | | | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/1/2017 11:02:25 AM | 32061 | | | | |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANICS | | | | | Analyst | TOM | | | | |
| Diesel Range Organics (DRO) | 13 | 9.4 | | mg/Kg | 1 | 6/1/2017 10:01:56 AM | 32055 | | | | |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 6/1/2017 10:01:56 AM | 32055 | | | | |
| Surr: DNOP | 87.6 | 70-130 | | %Rec | 1 | 6/1/2017 10:01:56 AM | 32055 | | | | |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | | | Analyst: | RAA | | | | |
| Gasoline Range Organics (GRO) | ND | 17 | | mg/Kg | 5 | 6/1/2017 11:29:05 AM | R43189 | | | | |
| Surr: BFB | 154 | 54-150 | S | %Rec | 5 | 6/1/2017 11:29:05 AM | R43189 | | | | |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: | RAA | | | | |
| Benzene | ND | 0.086 | | mg/Kg | 5 | 6/1/2017 11:29:05 AM | B43189 | | | | |
| Toluene | ND | 0.17 | | mg/Kg | 5 | 6/1/2017 11:29:05 AM | B43189 | | | | |
| Ethylbenzene | ND | 0.17 | | mg/Kg | 5 | 6/1/2017 11:29:05 AM | B43189 | | | | |
| Xylenes, Total | ND | 0.34 | | mg/Kg | 5 | 6/1/2017 11:29:05 AM | B43189 | | | | |

66.6-132

%Rec

5

6/1/2017 11:29:05 AM

B43189

112

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

Qualifiers:

*

D

Surr: 4-Bromofluorobenzene

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID MB-32061 | SampType: mblk | TestCode: EPA Method | 300.0: Anions | |
|---|--|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 32061 | RunNo: 43191 | | |
| Prep Date: 6/1/2017 ` | Analysis Date: 6/1/2017 | SeqNo: 1360495 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| the second se | | | | |
| Sample ID LCS-32061 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32061 Client ID: LCSS | SampType: Ics Batch ID: 32061 | TestCode: EPA Method RunNo: 43191 | 300.0: Anions | |
| | | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32061 Analysis Date: 6/1/2017 | RunNo: 43191 | | RPDLimit 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
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
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- W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID LCS-32055 | SampT | SampType: LCS | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
|---|-------------------------------|---|---------------|-------------|---|----------------|---|------------|------------|------|
| Client ID: LCSS | Batch ID: 32055 | | | F | RunNo: 43184 | | | | | |
| Prep Date: 6/1/2017 | Analysis Date: 6/1/2017 | | | Ś | SeqNo: 1 | 359572 | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 44 | 10 | 50.00 | 0 | 87.4 | 73.2 | 114 | | | |
| Surr: DNOP | 4.9 | | 5.000 | | 98.0 | 70 | 130 | | | |
| | | and the second se | | | | | and the second se | | | |
| Sample ID MB-32055 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Range | e Organics | |
| Sample ID MB-32055 Client ID: PBS | | ype: ME | | | tCode: El | | 8015M/D: Di | esel Range | e Organics | |
| | | D: 32 | | F | | 3184 | 8015M/D: Di Units: mg/K | U | e Organics | |
| Client ID: PBS | Batch | D: 32 | 055 1/2017 | F | RunNo: 4 | 3184 | | U | e Organics | Qual |
| Client ID: PBS Prep Date: 6/1/2017 | Batch Analysis D | ate: 6/ | 055 1/2017 | F | RunNo: 4 SeqNo: 1 | 3184 359573 | Units: mg/M | (g | , | Qual |
| Client ID: PBS Prep Date: 6/1/2017 Analyte | Batch Analysis D Result | ate: 6/ | 055 1/2017 | F | RunNo: 4 SeqNo: 1 | 3184 359573 | Units: mg/M | (g | , | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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
- Ρ Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

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WO#:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID 2.5UG GRO LCS | SampT | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
|-------------------------------|-------------------------|---------------|-----------|-------------|--|-----------|--------------|-----------|----------|------|
| Client ID: LCSS | Batch ID: R43189 | | | F | 3189 | | | | | |
| Prep Date: | Analysis Date: 6/1/2017 | | | S | SeqNo: 1 | 359964 | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 99.4 | 76.4 | 125 | | | |
| Surr: BFB | 1200 | | 1000 | | 120 | 54 | 150 | | | |
| Sample ID RB | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: PBS | Batch | ID: R4 | 3189 | F | RunNo: 4 | 3189 | | | | |
| Prep Date: | Analysis D | ate: 6/ | 1/2017 | S | SeqNo: 1 | 359965 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1100 | | 1000 | | 111 | 54 | 150 | | | |

Qualifiers:

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- S % Recovery outside of range due to dilution or matrix
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- J Analyte detected below quantitation limits
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- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Client:Blagg EngineeringProject:MUDGE LS 6

| Sample ID 100NG BTEX LCS | Samp1 | SampType: LCS TestCode: EPA Meth | | | | PA Method | 8021B: Vola | tiles | | |
|-------------------------------|----------------------|----------------------------------|-----------|-------------|--------------|-----------|---------------------------------|-----------|----------|------|
| Client ID: LCSS | Batcl | Batch ID: B43189 | | | RunNo: 43189 | | | | | |
| Prep Date: | Analysis D | Date: 6/ | 1/2017 | S | SeqNo: 1 | 359968 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.94 | 0.025 | 1.000 | 0 | 94.5 | 80 | 120 | | | |
| Toluene | 0.94 | 0.050 | 1.000 | 0 | 93.7 | 80 | 120 | | | |
| Ethylbenzene | 0.94 | 0.050 | 1.000 | 0 | 94.0 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 94.2 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 112 | 66.6 | 132 | | | |
| Sample ID RB | SampT | ype: ME | BLK | Test | tCode: EF | PA Method | 8021B: Volat | iles | | |
| Client ID: PBS | Batch | 1D: B4 | 3189 | R | unNo: 4 | 3189 | | | | |
| | | | 0100 | | unite | 100 | | | | |
| Prep Date: | Analysis D | ate: 6/ | | | SeqNo: 1 | | Units: mg/K | g | | |
| Prep Date: Analyte | Analysis D Result | ate: 6/ PQL | 1/2017 | | eqNo: 1 | | Units: mg/K HighLimit | g %RPD | RPDLimit | Qual |
| | | | 1/2017 | S | eqNo: 1 | 359971 | | • | RPDLimit | Qual |
| Analyte | Result | PQL | 1/2017 | S | eqNo: 1 | 359971 | | • | RPDLimit | Qual |
| Analyte Benzene Toluene | Result ND | PQL 0.025 | 1/2017 | S | eqNo: 1 | 359971 | | • | RPDLimit | Qual |
| Analyte Benzene | Result ND ND | PQL 0.025 0.050 | 1/2017 | S | eqNo: 1 | 359971 | | • | RPDLimit | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S $\hfill \%$ Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
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| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental Albu Albu TEL: 505-345-3975 Website: www.hal | 4901 querqu FAX: 5 | Hawkins NI ie, NM 87109 05-345-4107 | s Sar | mple Log-In Check List |
|--|--|---------------------------|---|----------------------|---|
| Client Name: BLAGG | Work Order Number: | 1706 | 002 | | RcptNo: 1 |
| Received By: Anne Thome Completed By: Anne Thome Reviewed By: ATT | 6/1/2017 7:20:00 AM 6/1/2017 7:59:22 AM 6/1/17 | | | Ann. H. Ann. H. | |
| <u>Chain of Custody</u> 1. Custody seals intact on sample bottles? 2. Is Chain of Custody complete? 3. How was the sample delivered? | | Yes Yes <u>Cour</u> | | No 🗌 | Not Present ☑ Not Present □ |
| 4. Was an attempt made to cool the samples? | | Yes | \checkmark | No 🗌 | NA 🗌 |
| 5. Were all samples received at a temperature | of >0° C to 6.0°C | Yes | | No 🗌 | |
| 6. Sample(s) in proper container(s)? | | Yes | \checkmark | No | · |
| Sufficient sample volume for indicated test(s Are samples (except VOA and ONG) proper We appropriate added to bettles? | | Yes | | No 🗌 No 🗍 | NA 🗌 |
| 9. Was preservative added to bottles?10.VOA vials have zero headspace?11. Were any sample containers received broke | n? | Yes | | No 🗌 No 🗹 | No VOA Vials # of preserved bottles checked |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes | | No | for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Custody? | Yes | N N | No 🗌 No 🗍 No 🗍 | Adjusted? |
| Special Handling (if applicable) | | | | | |
| 16. Was client notified of all discrepancies with the Person Notified: By Whom: Regarding: | nis order? Date / Via: | Yes] eMa | il 🗌 Phor | No 🗌 | NA 🗹 |
| Client Instructions: | | | | | |
| 17. Additional remarks: 18. <u>Cooler Information</u> Cooler No Temp °C Condition Se 1.7 Good Yes Page 1 of 1 | al Intact Seal No Se | eal Da | te Sig | ned By | |

| Client: Mailing | BP A BLAGG Address | AMERIC | A BERING INC. | Turn-Around □ Standard Project Name Mut Project #: | Rush | | HALL ENVIRONME ANALYSIS LABORA www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request | | | | R A | | | | | | | | | |
|--------------------------------------|---|------------|---------------------------|--|---------------------------|--|---|-----------------------|---------------------|----------------|--------------------|---------------------------|---------------|---|------------------------------|-------------|-----------------|----------|------|----------------------|
| email o | r Fax#: Package: dard tation AP | | Level 4 (Full Validation) | Sampler: J On Ice: Sample Temp | BLA66 T. BLA66 XYes | 0 No 1-CF-1.0=1.7 | MTDE - TWD's (8021) | MTBE + TPH (Gas only) | B (GRO / DRO / MRO) | (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PCB's | | | ÞE | | s (Y or N) |
| Date | Time | Matrix | Sample Request ID | Type and # | Preservative Type | HEAL NO. 170602 | BTEX + M | BTEX + M | TPH 8015B | TPH (Meth | EDB (Meth | PAH's (83 | RCRA 8 Metals | Anions (F, | 8081 Pest | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | Air Bubbles (Y or N) |
| 3/17 | 1520 | SOIL | ZONE 8 | 402=1 | Ceac | -201 | X | | X | | | | | | | | | X | | |
| | 1532 | | TSP-16 GRAG#2022 | | | -202 203 | X | | XX | | | | | | | | | X | | |
| | | | | | | | | | | | | | | | | | | | | |
| Date: 31/2017 Date: 5/31/17 | Time: 1707 Time: 1851 | Relinquish | ff Blogg | Received by: | Jap 2 | Date Time 53:2017 1707 Date Time 06/0//17 0720 | v | UBS | VEL | ID : EME | V vt: | (HI) L | .1- | OO | 18 18 | 1 M- | ٤: | Mui | e Ma | 2 |

If necessary, amples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



June 06, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

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

OrderNo.: 1706156

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/5/2017 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,

Andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

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

Lab Order 1706156

Date Reported: 6/6/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: TSP-17 Project: MUDGE LS 6 Collection Date: 6/2/2017 1:41:00 PM Lab ID: 1706156-001 Matrix: SOIL Received Date: 6/5/2017 7:30:00 AM Analyses Result PQL Qual Units DF Date Analyzed Batch

| EPA METHOD 300.0: ANIONS | | | | | Analyst | MRA |
|----------------------------------|---------|----------|-------|----|----------------------|-------|
| Chloride | ND | 30 | mg/Kg | 20 | 6/5/2017 11:05:56 AM | 32100 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | s | | | Analyst | TOM |
| Diesel Range Organics (DRO) | ND | 9.9 | mg/Kg | 1 | 6/5/2017 9:33:55 AM | 32097 |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 6/5/2017 9:33:55 AM | 32097 |
| Surr: DNOP | 87.6 | 70-130 | %Rec | 1 | 6/5/2017 9:33:55 AM | 32097 |
| EPA METHOD 8015D: GASOLINE RANGE | Ξ | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 18 | mg/Kg | 5 | 6/5/2017 1:03:21 PM | 32090 |
| Surr: BFB | 109 | 54-150 | %Rec | 5 | 6/5/2017 1:03:21 PM | 32090 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.092 | mg/Kg | 5 | 6/5/2017 1:03:21 PM | 32090 |
| Toluene | ND | 0.18 | mg/Kg | 5 | 6/5/2017 1:03:21 PM | 32090 |
| Ethylbenzene | ND | 0.18 | mg/Kg | 5 | 6/5/2017 1:03:21 PM | 32090 |
| Xylenes, Total | ND | 0.37 | mg/Kg | 5 | 6/5/2017 1:03:21 PM | 32090 |
| Surr: 4-Bromofluorobenzene | 122 | 66.6-132 | %Rec | 5 | 6/5/2017 1:03:21 PM | 32090 |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank |
|-------------|----|---|----|---|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 1 of 6 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |
| | | , | | I I I |

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-32100 | SampType: MBLK | TestCode: EPA Method 300.0: Anions | | | | | | | |
|--|----------------------------------|---|-----------------|--|--|--|--|--|--|
| Client ID: PBS | Batch ID: 32100 | RunNo: 43257 | | | | | | | |
| Prep Date: 6/5/2017 | Analysis Date: 6/5/2017 | SeqNo: 1362428 Units: mg/Kg | . x. | | | | | | |
| Analyte | Result PQL SPK value S | SPK Ref Val %REC LowLimit HighLimit %RPI | D RPDLimit Qual | | | | | | |
| Chloride | ND 1.5 | | | | | | | | |
| Sample ID LCS-32100 SampType: LCS TestCode: EPA Method 300.0: Anions | | | | | | | | | |
| Sample ID LCS-32100 | SampType: LCS | TestCode: EPA Method 300.0: Anions | | | | | | | |
| Sample ID LCS-32100 Client ID: LCSS | SampType: LCS Batch ID: 32100 | TestCode: EPA Method 300.0: Anions RunNo: 43257 | | | | | | | |
| | 1 21 | | | | | | | | |
| Client ID: LCSS | Batch ID: 32100 | RunNo: 43257 SeqNo: 1362429 Units: mg/Kg | D RPDLimit 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
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Ρ Sample pH Not In Range
- **Reporting Detection Limit** RL
- W Sample container temperature is out of limit as specified

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06-Jun-17

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:MUDGE LS 6

| SampTy | ype: LC | S | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | |
|--|---|---|---|--|---|--|--|--|---|--|
| Batch | ID: 32 | 097 | RunNo: 43241 | | | | | | | |
| Analysis Da | ate: 6/ | 5/2017 | S | eqNo: 1 | 361182 | Units: mg/K | g | | | |
| Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| 43 | 10 | 50.00 | 0 | 86.7 | 73.2 | 114 | | , | | |
| 3.6 | | 5.000 | | 72.5 | 70 | 130 | | | | |
| | | | | | | | | | | |
| SampTy | pe: ME | BLK | Test | Code: El | PA Method | 8015M/D: Die | esel Range | e Organics | | |
| Sample ID MB-32097 SampType: MBLK Client ID: PBS Batch ID: 32097 | | | | | | | | | | |
| Batch | ID: 32 | 097 | R | unNo: 4 | 3241 | | | | | |
| Batch Analysis Da | | 097 5/2017 | | unNo: 4 | | Units: mg/K | g | | | |
| | | 5/2017 | | | | Units: mg/K HighLimit | g %RPD | RPDLimit | Qual | |
| Analysis Da | ate: 6/ | 5/2017 | S | eqNo: 1 | 361183 | 5 | 0 | RPDLimit | Qual | |
| Analysis Da Result | ate: 6/ PQL | 5/2017 | S | eqNo: 1 | 361183 | 5 | 0 | RPDLimit | Qual | |
| | Batch Analysis Da Result 43 3.6 SampTy | Batch ID: 32 Analysis Date: 6/ Result PQL 43 10 3.6 SampType: ME | 43 10 50.00 | Batch ID: 32097 R Analysis Date: 6/5/2017 S Result PQL SPK value SPK Ref Val 43 10 50.00 0 3.6 5.000 0 | Batch ID: 32097 RunNo: 4 Analysis Date: 6/5/2017 SeqNo: 1 Result PQL SPK value SPK Ref Val %REC 43 10 50.00 0 86.7 3.6 5.000 72.5 | Batch ID: 32097 RunNo: 43241 Analysis Date: 6/5/2017 SeqNo: 1361182 Result PQL SPK value SPK Ref Val %REC LowLimit 43 10 50.00 0 86.7 73.2 3.6 5.000 72.5 70 | Batch ID: 32097 RunNo: 43241 Analysis Date: 6/5/2017 SeqNo: 1361182 Units: mg/K Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 43 10 50.00 0 86.7 73.2 114 3.6 5.000 72.5 70 130 | Batch ID: 32097 RunNo: 43241 Analysis Date: 6/5/2017 SeqNo: 1361182 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 43 10 50.00 0 86.7 73.2 114 3.6 5.000 72.5 70 130 | Batch ID: 32097 RunNo: 43241 Analysis Date: 6/5/2017 SeqNo: 1361182 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 43 10 50.00 0 86.7 73.2 114 3.6 5.000 72.5 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
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Blagg Engineering Project: MUDGE LS 6

| Sample ID MB-32090 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
|--|---------------------|----------|---------------|-------------|----------------------|----------------|----------------------------|------------|---------------|------|
| Client ID: PBS | Batch | n ID: 32 | 090 | F | RunNo: 4 | 3255 | | | | |
| Prep Date: 6/2/2017 | Analysis D | ate: 6/ | 5/2017 | S | SeqNo: 1 | 361956 | Units: mg/M | ٢g | | |
| 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 | | 102 | 54 | 150 | | | |
| | | | | | | | | | | |
| Sample ID LCS-32090 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | Ð | |
| Sample ID LCS-32090 Client ID: LCSS | | ype: LC | | | tCode: El | | 8015D: Gasc | oline Rang | 9 | |
| | | D: 32 | 090 | F | | 3255 | 8015D: Gaso Units: mg/K | | 9 | |
| Client ID: LCSS | Batch | D: 32 | 090 5/2017 | F | RunNo: 4 | 3255 | | | e RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/2/2017 | Batch Analysis D | ate: 6/ | 090 5/2017 | F | RunNo: 4 SeqNo: 1 | 3255 361957 | Units: mg/K | (g | | Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % 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 J
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

1706156 06-Jun-17

WO#:

Page 5 of 6

Client:

| Hall | Environmental | Analysis | Laboratory, | Inc. |
|------|---------------|----------|-------------|------|
| | | | | |

Client: Blagg Engineering **Project:** MUDGE LS 6

| Press of the second | | | | | and the second se | | | | | |
|--|------------|----------------|----------------|-------------|---|-----------|--------------|-------|----------|------|
| Sample ID MB-32090 | Samp | Гуре: М | BLK | Tes | tCode: El | PA Method | 8021B: Volat | tiles | | |
| Client ID: PBS | Batc | h ID: 32 | 090 | F | RunNo: 4 | 3255 | | | | |
| Prep Date: 6/2/2017 | Analysis [| Date: 6/ | 5/2017 | S | SeqNo: 1 | 361976 | 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-Bromofluorobenzene | 1.3 | | 1.000 | | 126 | 66.6 | 132 | | | |
| Sample ID LCS-32090 | Samp | Type: LC | S | Test | Code: El | PA Method | 8021B: Volat | iles | | |
| Client ID: LCSS | Batcl | h ID: 32 | 090 | R | unNo: 4 | 3255 | | | | |
| Prep Date: 6/2/2017 | Analysis D | Date: 6/ | 5/2017 | S | eqNo: 1 | 361977 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 99.8 | 80 | 120 | | | |
| | | | | | | | | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 99.9 | 80 | 120 | | | |
| Toluene Ethylbenzene | 1.0 1.0 | 0.050 0.050 | 1.000 1.000 | 0 | 99.9 101 | 80 80 | 120 120 | | | |
| | | | | _ | | | | | | |

Qualifiers:

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

Page 6 of 6

WO#: 1706156 06-Jun-17

| HALL ENVIRON ANALYSIS LABORAT | 8 | Hall Environmental Albu TEL: 505-345-3975 Website: www.ha | s NE 7109 Sam | Sample Log-In Check Lis | | | | | | |
|--|---|--|--|--|---|------------------|--|--|--|--|
| Client Name: BL | AGG | Work Order Number: | 1706156 | | RcptNo: 1 | | | | | |
| Received By: Ar | nne Thome | 6/5/2017 7:30:00 AM | | Anne Home Anne Home | - | | | | | |
| Completed By: Ar | nne Thorne | 6/5/2017 8:08:00 AM | | anne Ham | - | | | | | |
| Reviewed By: | 24 | 615/17 | | | | | | | | |
| Chain of Custod | ۲. | | | | | | | | | |
| 1. Custody seals int | tact on sample bottles? | | Yes | No 🗆 | Not Present 🗹 | | | | | |
| 2. Is Chain of Custo | ody complete? | | Yes 🗹 | No 🗌 | Not Present | | | | | |
| 3. How was the san | nple delivered? | | Courier | | | | | | | |
| Log In | | | | | | | | | | |
| 4. Was an attempt | made to cool the sample | s? | Yes 🗹 | No 🗌 | NA 🗌 | | | | | |
| 5. Were all samples | s received at a temperatu | re of >0° C to 6.0°C | Yes 🗹 | No 🗌 | | | | | | |
| 6. Sample(s) in pro | per container(s)? | | Yes 🗹 | No 🗌 | | | | | | |
| 7. Sufficient sample | volume for indicated tes | t(s)? | Yes 🗹 | No 🗌 | | | | | | |
| 8. Are samples (exc | ept VOA and ONG) prop | erly preserved? | Yes 🗸 | No 🗌 | | | | | | |
| 9. Was preservative | added to bottles? | | Yes | No 🗹 | NA 🗆 | | | | | |
| 10. VOA vials have z | ero headspace? | | Yes | No 🗆 | No VOA Vials 🗹 | | | | | |
| 11. Were any sample | e containers received bro | ken? | Yes | No 🗹 🗄 | # of preserved bottles checked | | | | | |
| 12. Does paperwork I (Note discrepanci | match bottle labels? ies on chain of custody) | | Yes 🗹 | No | 1 | 12 unless noted) | | | | |
| 13. Are matrices corre | ectly identified on Chain | of Custody? | Yes 🗹 | No 🗌 | Adjusted? | | | | | |
| | alyses were requested? | | Yes 🗹 | No 🗌 | | | | | | |
| 15. Were all holding t (If no, notify custo | times able to be met? omer for authorization.) | | Yes 🗹 | No 🗌 | Checked by: | | | | | |
| Special Handling | (if applicable) | | | | | | | | | |
| 16. Was client notified | d of all discrepancies with | this order? | Yes | No 🗆 | NA 🗹 | | | | | |
| Person Noti | fied: | Date | an | NAMES OF A DESCRIPTION OF | : | | | | | |
| By Whom: | | Via: | eMail 🗌 P | Phone 🗌 Fax | in Person | | | | | |
| Regarding: | | | | Commences of the second se | 1.0.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1 | | | | | |
| Client Instru 17. Additional remark | 3 | | | | | | | | | |
| | | | | | | | | | | |
| 18. <u>Cooler Informati</u> Cooler No T | | Seal Intact Seal No S | eal Date | Signed By | | | | | | |
| 1 1.0 | | es | | | | | | | | |
| Page 1 of 1 | | | | | <u></u> | | | | | |

| C | hain- | of-Cu | istody Record | Turn-Around | Time: | SAME | | | | н | | | FI | NV. | | 20 | NIR | 1EI | NTA | |
|-----------|--|-------------|--|-------------------------|---|--|----------|-------------------------|-------------------|--------------------|--------------------|---|-----------------------|---|------------------------|-----------------------|-----------------|-----------|-----------|----------------------|
| Client: 1 | BP AI | MERICA | | □ Standard | Rush | | | 0270 | | | | | | | | | | | TO | |
| 1 | BLAGG | ENGIN | JEERNG- | Project Name | | | | | | | | | | | nent | | | | | |
| Mailing | Address | | | Mud | GE LS | 6 | | 101 | 11 เม | awkir | | | | | | | | 100 | | |
| | | | | Project #: | | | 1 | | | | | | | | , | | | | | |
| Dhone d | + (50 | -1 27 | D-1183 | - | | | | Te | 1. 50 | 5-34 | 5-35 | and the state of the | and the second second | - | Req | and the second second | 4107 | | | |
| email or | | 5) 52 | D- 1102 | Project Mana | 000 | | | 3 | 6 | | 1 | | indiy | | - Cu | uuse | | | | TI |
| QA/QC F | An and the second s | | | | | | (8021) | onl | MRC | | | _ | | SO | S | | | | | |
| Stan | - | | Level 4 (Full Validation) | ST | EVE Mos | 1542 | (80 | Gas | 20 | | | SIMS) | | 04 | PCB's | | | | | |
| Accredi | | | La reversi (i un venderion) | Samplar: 7 | EFF BLAG | 6 | in se | H | DB | | ~ | 0 SI | | 03,1 | 82 | | | | | |
| D NEL | | D Othe | er | | | | S.EIMB'S | H - | (GRO / DRO / MRO) | ŝ | 74.1 | 827 | | 3.N | / 80 | | F | | | NIN- |
| | (Type) | | | Sample Tem | and the second se | 0 | - 11 | Щ | (64 | d 41 | d 50 | or | 1315 | N. | des | 2 | ŝ | w | | 2 |
| | | | | 1 oblostin | | | MEBE | + MTBE + TPH (Gas only) | TPH 8015B | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 | RCRA 8 Metals | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 | 8260B (VOA) | 8270 (Seml-VOA) | CHLORIDE | | Air Dudding /V nr NV |
| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative | HEAL No. | + × | + × | 80 | N) | Ň | S (8 | A 8 |) su | Pe | B | (S. | Ko | | 44 |
| | | | | Mcoltkit | Туре | 1706156 | BTEX | BTEX | H | H | 8 | AH | SCR | Anio | 3081 | 3260 | 3270 | J | | |
| Thor | 1341 | SOIL | TSP-17 | 406×1 | COOL | -201 | X | | X | | | | - | 4 | ų | | | X | | ++ |
| ų | 1354 | 11 | ZONE 9 | 14 | ш | 702 | X | | × | | | | | | | | | * | | |
| | 1501 | | | | | | | | | | | | | | | | | - | | |
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| | | | | | | | - | | | | | | | | | | | | | |
| Date: | Time: | Relinquish | ned by: | Received by: | 1 | Date Time | Re | mark | s: B | KL I | BP | - | | - | CON | TACI | -> 5 | STEVI | EM | OSKAL |
| 15/10 | 1847 | 1 Jef | 1 Blagg | Ande | hit. | 1847 1847 | 7 | | V | D: | VH | ixon | | em | | | | | | |
| Date: | Time: | Relinquist | ned by: | Received by: | no A. | Date Time | | WBS | E | EME | UT . | : 1 | 1- | OC | >18 | M- | · E: | MUS | XGEL | .\$6 |
| 44/17 | 1914 | 1. hri | Atra 11/00 Lo | 1/1 | 16.1 | 06/05/17 | T | SP : | c | NE | - | and a second | -> | . 1 | , 1 | 1.1 | 2 | | | |
| 1.1.1 | If necessary. | samples sut | omitted to Hall Environmental may be sub | contracted to other a | ccredited laboratori | State of the second | | | | | | | | | | | | analytica | t report. | |
| | , | / | | | | | | | | | | | | | | | | | | |

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



June 08, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS #6

OrderNo.: 1706316

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/7/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1706316

Date Reported: 6/8/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering Project: MUDGE LS #6 | Client Sample ID: TSP-18 Collection Date: 6/6/2017 1:42:00 PM | | | | | | | | | |
|---|--|--------|------|----------|-----------|----------------------|-------|--|--|--|
| Lab ID: 1706316-001 | Matrix: S | SOIL | | Received | Date: 6/7 | 7/2017 7:30:00 AM | | | | |
| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch | | | |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst | LGT | | | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/7/2017 11:29:16 AM | 32151 | | | |
| EPA METHOD 8015M/D: DIESEL RA | NGE ORGANICS | | | | | Analyst | TOM | | | |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 6/7/2017 9:17:00 AM | 32146 | | | |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 6/7/2017 9:17:00 AM | 32146 | | | |
| Surr: DNOP | 83.0 | 70-130 | | %Rec | 1 | 6/7/2017 9:17:00 AM | 32146 | | | |
| EPA METHOD 8015D: GASOLINE RA | ANGE | | | | | Analyst | NSB | | | |
| Gasoline Range Organics (GRO) | ND | 3.1 | | mg/Kg | 1 | 6/7/2017 9:59:24 AM | 32141 | | | |
| Surr: BFB | 162 | 54-150 | S | %Rec | 1 | 6/7/2017 9:59:24 AM | 32141 | | | |

| Surr: BFB | 162 | 54-150 | S | %Rec | 1 | 6/7/2017 9:59:24 AM | 32141 |
|-----------------------------|-----|----------|---|-------|---|---------------------|-------|
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst | NSB |
| Benzene | ND | 0.016 | | mg/Kg | 1 | 6/7/2017 9:59:24 AM | 32141 |
| Toluene | ND | 0.031 | | mg/Kg | 1 | 6/7/2017 9:59:24 AM | 32141 |
| Ethylbenzene | ND | 0.031 | | mg/Kg | 1 | 6/7/2017 9:59:24 AM | 32141 |
| Xylenes, Total | ND | 0.063 | | mg/Kg | 1 | 6/7/2017 9:59:24 AM | 32141 |
| Surr: 4-Bromofluorobenzene | 128 | 66.6-132 | | %Rec | 1 | 6/7/2017 9:59:24 AM | 32141 |

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

Qualifiers:

*

- Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix
- D Sample Diluted Due to MatrixH Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 5
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS #6

| Sample ID MB-32151 | SampType: mblk | TestCode: EPA Method 300.0: Anions | |
|--|--|--|----------|
| Client ID: PBS | Batch ID: 32151 | RunNo: 43316 | |
| Prep Date: 6/7/2017 | Analysis Date: 6/7/2017 | SeqNo: 1363806 Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLir | nit Qual |
| Chloride | ND 1.5 | | |
| | | | |
| Sample ID LCS-32151 | SampType: Ics | TestCode: EPA Method 300.0: Anions | |
| Sample ID LCS-32151 Client ID: LCSS | SampType: Ics Batch ID: 32151 | TestCode: EPA Method 300.0: Anions RunNo: 43316 | |
| • | 1 21 | | |
| Client ID: LCSS | Batch ID: 32151 Analysis Date: 6/7/2017 | RunNo: 43316 | nit Qual |

Oualifiers:

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

Page 2 of 5

08-Jun-17

Client:Blagg EngineeringProject:MUDGE LS #6

| Sample ID LCS-32146 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
|--------------------------------|-------------|---------|-----------|-------------|-----------|-----------|--------------|------------|------------|------|
| Client ID: LCSS | Batch | ID: 32 | 146 | F | RunNo: 4 | 3305 | | | | |
| Prep Date: 6/7/2017 | Analysis Da | ate: 6/ | 7/2017 | ` S | SeqNo: 1 | 363279 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 10 | 50.00 | 0 | 91.6 | 73.2 | 114 | | | |
| Surr: DNOP | 3.8 | | 5.000 | | 76.2 | 70 | 130 | | | |
| Sample ID MB-32146 | SampTy | pe: ME | BLK | Test | tCode: El | PA Method | 8015M/D: Die | esel Range | e Organics | |
| Client ID: PBS | Batch | ID: 32 | 146 | R | RunNo: 4 | 3305 | | | | |
| Prep Date: 6/7/2017 | Analysis Da | ate: 6/ | 7/2017 | S | SeqNo: 1 | 363280 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 8.1 | | 10.00 | | 81.2 | 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
- R RPD outside accepted recovery limits
- 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

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08-Jun-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1706316

08-Jun-17

| Client:Blagg EProject:MUDG | ngineering E LS #6 | | | | | | | | | |
|--|-----------------------|---------|---------------|-------------|------------|------------|-------------|-----------|----------|------|
| Sample ID MB-32141 | SampT | ype: MI | BLK | Tes | tCode: E | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: PBS | Batch | ID: 32 | 141 | F | RunNo: 4 | 3317 | | | | |
| Prep Date: 6/6/2017 | Analysis D | ate: 6/ | 7/2017 | S | SeqNo: 1 | 364057 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) Surr: BFB | ND 1000 | 5.0 | 1000 | | 101 | 54 | 150 | | | |
| Sample ID LCS-32141 | SampT | ype: LC | s | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: LCSS | Batch | ID: 32 | 141 | F | RunNo: 4 | 3317 | | | | |
| Prep Date: 6/6/2017 | Analysis D | ate: 6/ | 7/2017 | 5 | SeqNo: 1 | 364058 | Units: mg/k | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) Surr: BFB | 26 1100 | 5.0 | 25.00 1000 | 0 | 103 106 | 76.4 54 | 125 150 | | | |

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
- R RPD outside accepted recovery limits
- 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 5

| Hall En | vironmental | Analysis | Laboratory, | Inc. |
|---------|-------------|----------|-------------|------|
|---------|-------------|----------|-------------|------|

Client:Blagg EngineeringProject:MUDGE LS #6

| Sample ID MB-32141 | Samp | Type: ME | BLK | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
|--|--|---|---|---------------------------------|---|---|--|-------|----------|------|
| Client ID: PBS | Batc | h ID: 32 | 141 | F | RunNo: 4 | 3317 | | | | |
| Prep Date: 6/6/2017 | Analysis [| Date: 6/ | 7/2017 | S | SeqNo: 1 | 364078 | 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 | | | | | | | | |
| | 1.0 | | 1 000 | | 100 | 66.6 | 132 | | | |
| Surr: 4-Bromofluorobenzene | 1.3 | | 1.000 | | 126 | 00.0 | 132 | | | |
| Surr: 4-Bromotiluorobenzene | | ype: LC | | Tes | | | 8021B: Volat | tiles | | |
| | SampT | ype: LC | S | | | PA Method | | tiles | | |
| Sample ID LCS-32141 | SampT | n ID: 32 | S 141 | F | tCode: El | PA Method 3317 | | | | |
| Sample ID LCS-32141 Client ID: LCSS | Samp1 Batcl | n ID: 32 | S 141 7/2017 | F | tCode: El | PA Method 3317 | 8021B: Volat | | RPDLimit | Qual |
| Sample ID LCS-32141 Client ID: LCSS Prep Date: 6/6/2017 Analyte | SampT Batcl Analysis D | n ID: 32 [,] Date: 6/ | S 141 7/2017 | F | Code: El CunNo: 4 GeqNo: 1 | PA Method 3317 364079 | 8021B: Volat | ģ | RPDLimit | Qual |
| Sample ID LCS-32141 Client ID: LCSS Prep Date: 6/6/2017 Analyte Benzene | SampT Batcl Analysis D Result | n ID: 32' Date: 6/ | S 141 7/2017 SPK value | F S SPK Ref Val | tCode: El tunNo: 4 seqNo: 1 %REC | PA Method 3317 364079 LowLimit | 8021B: Volat Units: mg/K HighLimit | ģ | RPDLimit | Qual |
| Sample ID LCS-32141 Client ID: LCSS Prep Date: 6/6/2017 Analyte Benzene Toluene | SampT Batcl Analysis D Result 1.1 | n ID: 32 Date: 6/ PQL 0.025 | S 141 7/2017 SPK value 1.000 | F S SPK Ref Val 0 | tCode: El tunNo: 4 teqNo: 1 %REC 105 | PA Method 3317 364079 LowLimit 80 | 8021B: Volat Units: mg/K HighLimit 120 | ģ | RPDLimit | Qual |
| Sample IDLCS-32141Client ID:LCSSPrep Date:6/6/2017 | SampT Batcl Analysis E Result 1.1 1.1 | n ID: 32 Date: 6/ PQL 0.025 0.050 | S 141 7/2017 SPK value 1.000 1.000 | F S SPK Ref Val 0 0 | tCode: El RunNo: 4: SeqNo: 1: %REC 105 106 | PA Method 3317 364079 LowLimit 80 80 | 8021B: Volat Units: mg/K HighLimit 120 120 | ģ | RPDLimit | 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
- R RPD outside accepted recovery limits
- 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

W

- RL Reporting Detection Limit
 - Sample container temperature is out of limit as specified

Page 5 of 5

08-Jun-17

| HALL ENVIRONMENT ANALYSIS LABORATORY | | 4901 H buquerque, 5 FAX: 50. | lawkins NE NM 87109 5-345-4107 | Sam | ple Log-in C | heck List |
|--|--|------------------------------------|--------------------------------------|--|-----------------------------------|-------------------|
| Client Name: BLAGG | Work Order Numbe | er: 1 7063 1 | 6 | | RcptNo: | 1 |
| Received By: Anne Tho Completed By: Anne Tho | | | G. | Pere Hann | _ | |
| Reviewed By: ENM | 06/07/17 | | Ű. | en Hrm | _ | |
| Chain of Custody | | | | _ | _ | |
| 1. Custody seals intact on s | ample bottles? | | | No 🗌 | Not Present | |
| 2. Is Chain of Custody com | plete? | Yes | | No 🗌 | Not Present | , |
| 3. How was the sample deli | vered? | Courie | [| | | |
| <u>Log in</u> | | | | | | |
| 4. Was an attempt made to | cool the samples? | Yes | \checkmark | No 🗌 | NA 🗌 | |
| 5. Were all samples receive | d at a temperature of >0° C to 6.0°C | Yes | 2 | No | | |
| 6. Sample(s) in proper cont | ainer(s)? | Yes | | No 🗌 | | |
| 7. Sufficient sample volume | | Yes | - | No 🗌 | | |
| 8. Are samples (except VOA | and ONG) properly preserved? | Yes | - | No 🗌 | | |
| 9. Was preservative added t | o bottles? | Yes | | No 🗹 | NA 🗌 | |
| 10. VOA vials have zero head | space? | Yes [| | No 🗌 | No VOA Vials | |
| 11. Were any sample contair | ers received broken? | Yes | | No 🗹 | # of preserved bottles checked | |
| 12. Does paperwork match be (Note discrepancies on ch | | Yes | | No 🗆 | for pH: | >12 unless noted) |
| 13. Are matrices correctly ide | | Yes | | No 🗌 | Adjusted? | |
| 14. Is it clear what analyses w | ere requested? | Yes | | No 🗆 | | |
| 15. Were all holding times ab (If no, notify customer for | | Yes | | No 🗌 | Checked by: | |
| Special Handling (if app | olicable) | | | | | |
| 16. Was client notified of all d | screpancles with this order? | Yes |] | No 🗌 | NA 🗹 | |
| Person Notified: | Date | | | BINN CONTRACTOR | | |
| By Whom: | Via: | 🗌 eMail | Phone | 🗌 Fax | In Person | |
| Regarding: | | | | adda analla factoria da constanta a para | | |
| Client Instructions: | n an | | | | | |
| 17. Additional remarks: | | | | | | |
| 18. <u>Cooler Information</u> Cooler No Temp °C 1 1.3 | Condition. Seal Intact Seal No | Seal Date | Signe | ed By | | |
| барунд 19 19 19 19 19 19 19 19 19 19 19 19 19 | | | | | | |

Page 1 of 1

| C | hain- | of-Cu | stody Record | I urn-Around | ıme: | SAME | | | | | | | - 100. 10 10. | <i></i> | | | | | | |
|--------------|---|--|--|--------------------------------------|----------------------|------------------------------------|----------------|------------------------------|-----------------------------|--------------------|--------------------|----------------|---|------------------------------|-------------|-----------------|----------|-------|-----------|--------|
| Client: | BP A | neria | -A | ☐ Standard | Rush | DRY | | | | | | | | | | | | NT/ | | / |
| | RIAL | 6 5 | BR. | Project Name | : | | | | | | | | | | | | | | | l |
| Mailing | Address | | | mud | GE LS | 46 | | 400 | 24.11 | | | | viron | | | | 400 | | | |
| | | | | Project #: | 8 | | | | | awkin | | | | | | | | | | |
| .Phone | # 10 | 2013 | 120-1183 | | | | | 16 | 1. 50 | 5-345 | -397 | - | Fax lysis | - | | | (| | | |
| email o | | <i>,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 100 | Project Mana | der: | | | 2 | ô | | | | | | | | | | | |
| | Package: | | | 1 | - | | 021) | uo s | MR | | | | Sol | B's | | | | | | |
| Star | - | | Level 4 (Full Validation) | | J. 84 | 125 | e-(8(| (Gas | 20 | | | SIMO | PO | PC | | | | | F | 1 |
| Accred | itation | □ Othe | r | Onlice | | | + TMB'+ (8021) | HdT + | RO / DF | 18.1) | | NZR | 03,NO2, | \$ / 8082 | | A) | 22.1 | | Composite | or N) |
| | (Type) | | | Sample Temi | perature | | | H | G | pd 4 | 5 po | | N/N | sides | (A | -VO | 10 | | 0 | E |
| Date | Time | Matrix | Sample Request ID | Arsulutip Container Type and # | Preservative Type | HEALNO | BTEX - WH | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH'S (8310 OF | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIOE | | 5 17. 6 | Bubble |
| 6/6/17 | 1342 | 5012 | TSP -18 | Meather | COOL | -201 | 1 | | V | | | | | | 80 | 8 | V | | V | |
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| Date: 6/6/,- | Time: | Relinquish | ed by: | Received by: | 1 | Date Time | | | | NUO | | | | | Cor | STA | 5: | STER | ê Ma | os Ken |
| Date: | Time: | Relinguish | ed by: | Received by. | Ret | 6/6/17 1506 Date Time | V | D | # 1 | VH | SXI | しや | VRn | - | | - | | offer | -/ | |
| 1/10 | Icitil | Mha: | tr. Diala | 4 / 1 | . 1 | 1 06/07/17 | | | | | | | | | | | | | 56 | |
| Turi | II.099 | samples sub | mitted to Hall Environmental may be sub- | contracted to other a | ccredited laboratori | ies. This serves as notice of this | | | | In AL | | | | | | | | | t. | |
| | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | V | | | | | | | | | | | | • | | | | • | #20 | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Hall Environmental Analysis Laboratory

June 09, 2017

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS #6

OrderNo.: 1706415

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/8/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1706415

Date Reported: 6/9/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering Project: MUDGE LS #6 Lab ID: 1706415-001 | Matrix: | SOIL | | Collecti | mple ID: TSP-19 on Date: 6/7/2017 2:13:00 PM ed Date: 6/8/2017 7:15:00 AM |
|--|---------|----------|------|----------|---|
| Analyses | Result | PQL | Oual | | DF Date Analyzed Batch |
| | | - (| C | | |
| EPA METHOD 300.0: ANIONS Chloride | ND | 30 | | mg/Kg | Analyst: MRA 20 6/8/2017 12:24:00 PM 32176 |
| EPA METHOD 8015M/D: DIESEL RANG | | 6 | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 14 | 9.4 | | mg/Kg | 1 6/8/2017 9:42:49 AM 32173 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 6/8/2017 9:42:49 AM 32173 |
| Surr: DNOP | 87.7 | 70-130 | | %Rec | 1 6/8/2017 9:42:49 AM 32173 |
| EPA METHOD 8015D: GASOLINE RANG | GE | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 31 | 3.4 | | mg/Kg | 1 6/8/2017 10:46:43 AM 32166 |
| Surr: BFB | 503 | 54-150 | S | %Rec | 1 6/8/2017 10:46:43 AM 32166 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: NSB |
| Benzene | ND | 0.017 | | mg/Kg | 1 6/8/2017 10:46:43 AM 32166 |
| Toluene | ND | 0.034 | | mg/Kg | 1 6/8/2017 10:46:43 AM 32166 |
| Ethylbenzene | ND | 0.034 | | mg/Kg | 1 6/8/2017 10:46:43 AM 32166 |
| Xylenes, Total | 0.22 | 0.069 | | mg/Kg | 1 6/8/2017 10:46:43 AM 32166 |
| Surr: 4-Bromofluorobenzene | 135 | 66.6-132 | S | %Rec | 1 6/8/2017 10:46:43 AM 32166 |

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
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 6 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1706415

Inc. Date Reported: 6/9/2017

Hall Environmental Analysis Laboratory, Inc.

| | | C | lient Sa | mple ID: TSP-20 |
|---------|---|---|--|--|
| | | | Collecti | on Date: 6/7/2017 2:21:00 PM |
| Matrix: | SOIL | | Receiv | ed Date: 6/8/2017 7:15:00 AM |
| Result | PQL | Qual | Units | DF Date Analyzed Batch |
| | | | | Analyst: MRA |
| ND | 30 | | mg/Kg | 20 6/8/2017 12:36:24 PM 32176 |
| ORGANIC | s | | | Analyst: TOM |
| 15 | 9.8 | | mg/Kg | 1 6/8/2017 10:05:14 AM 32173 |
| ND | 49 | | mg/Kg | 1 6/8/2017 10:05:14 AM 32173 |
| 87.8 | 70-130 | | %Rec | 1 6/8/2017 10:05:14 AM 32173 |
| E | | | | Analyst: NSB |
| 44 | 16 | | mg/Kg | 5 6/8/2017 11:10:41 AM 32166 |
| 208 | 54-150 | S | %Rec | 5 6/8/2017 11:10:41 AM 32166 |
| | | | | Analyst: NSB |
| ND | 0.082 | | mg/Kg | 5 6/8/2017 11:10:41 AM 32166 |
| ND | 0.16 | | mg/Kg | 5 6/8/2017 11:10:41 AM 32166 |
| ND | 0.16 | | mg/Kg | 5 6/8/2017 11:10:41 AM 32166 |
| 0.38 | 0.33 | | mg/Kg | 5 6/8/2017 11:10:41 AM 32166 |
| 125 | 66.6-132 | | %Rec | 5 6/8/2017 11:10:41 AM 32166 |
| | Result ND ORGANIC 15 ND 87.8 E 44 208 ND ND ND 0.38 | ND 30 ORGANICS 15 9.8 ND 49 87.8 70-130 E 44 16 208 54-150 ND 0.082 ND 0.16 ND 0.16 0.38 0.33 | Matrix: SOIL Result PQL Qual ND 30 ID 30 ID 9.8 ND 49 87.8 70-130 E 44 16 54-150 ND 0.082 ND 0.166 ND 0.16 0.38 0.33 | Matrix:SOILCollectionMatrix:SOILReceiveResultPQLQualUnitsND30mg/KgND30mg/Kg159.8mg/KgND49mg/Kg87.870-130%Rec4416mg/Kg20854-150SND0.082mg/KgND0.16mg/KgND0.16mg/KgND0.16mg/KgND0.16mg/Kg0.380.33mg/Kg |

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
- R RPD outside accepted recovery limits
- 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 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS #6

| Sample ID MB-32176 | SampType: mblk | TestCode: EPA Method | 300.0: Anions | |
|--|--|--------------------------------------|---|---------------|
| Client ID: PBS | Batch ID: 32176 | RunNo: 43353 | | |
| Prep Date: 6/8/2017 | Analysis Date: 6/8/2017 | SeqNo: 1365965 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | e SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | and the second se | |
| Sample ID LCS-32176 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32176 Client ID: LCSS | SampType: Ics Batch ID: 32176 | TestCode: EPA Method RunNo: 43353 | 300.0: Anions | |
| | 1 51 | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32176 Analysis Date: 6/8/2017 | RunNo: 43353 | | RPDLimit Qual |

Qualifiers:

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

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09-Jun-17

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering Project: MUDGE LS #6

| Diseal Range Organics (DRO) 43 10 50.00 0 85.6 73.2 114 Surr: DNOP 4.0 5.000 79.7 70 130 Sample ID MB-32173 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32173 RunNo: 43341 Prep Date: 6/8/2017 Analysis Date: 6/8/2017 SeqNo: 1364720 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Diesel Range Organics (DRO) ND 10 <th></th> <th></th> <th></th> <th></th> <th></th> | | | | | |
|---|--------------------------------|----------------------------|----------------------|-------------------------|---------------|
| Prep Date:6/8/2017Analysis Date:6/8/2017SeqNo:1364719Units:mg/KgAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitDiesel Range Organics (DRO)431050.00085.673.2114Surr: DNOP4.05.00079.770130Sample IDMB-32173SampType:MBLKTestCode:EPA Method 8015M/D:Diesel Range OrganicsClient ID:PBSBatch ID:32173RunNo:43341Prep Date:6/8/2017AnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitDiesel Range Organics (DRO)ND10Mohr Oil Range Organics (MRO)ND50Surr: DNOP8.910.0089.470130Sample IDLCS-32152SampType:LCSTestCode:EPA Method 8015M/D:Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo:43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo:1364955Units:%RecAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitSample IDLCS-32152SampType:MBLKTestCode:EPA Method 8015M/D:Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo:43341TestCode:EPA Me | Sample ID LCS-32173 | SampType: LCS | TestCode: EPA Method | 8015M/D: Diesel Range | Organics |
| AnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitDiesel Range Organics (DRO)431050.00085.673.2114Surr: DNOP4.05.00079.770130Sample IDMB-32173SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:32173RunNo: 43341Prep Date:6/8/2017Analysis Date:6/8/2017SeqNo: 1364720Units: mg/KgAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDDiesel Range Organics (DRO)ND10ND50Surr: DNOP8.910.0089.470130Sample IDLCS-32152SampType:LCSTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo: 43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo: 1364955Units: %RecAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDSample IDMB-32152SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo: 43341SeqNo: 1364955Units: %RecAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimit< | Client ID: LCSS | Batch ID: 32173 | RunNo: 43341 | | |
| Liesel Range Organics (DRO) 43 10 50.00 0 85.6 73.2 114 Surr: DNOP 4.0 5.000 79.7 70 130 Sample ID MB-32173 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32173 RunNo: 43341 Prep Date: 6/8/2017 Analysis Date: 6/8/2017 SeqNo: 1364720 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Diesel Range Organics (DRO) ND 10 ND 50 Surr: DNOP 8.9 10.00 89.4 70 130 Sample ID LCS-32152 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 136 | Prep Date: 6/8/2017 | Analysis Date: 6/8/2017 | SeqNo: 1364719 | Units: mg/Kg | |
| Surr: DNOP4.05.00079.770130Sample IDMB-32173SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:32173RunNo:43341Prep Date:6/8/2017Analysis Date:6/8/2017SeqNo:1364720AnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDDiesel Range Organics (DRO)ND10Motor Oil Range Organics (MRO)ND50Surr: DNOP8.910.0089.470130Sample IDLCS-32152SampType:LCSTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo:43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo:1364955AnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDSample IDMB-32152SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsSample IDMB-32152SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:32152RunNo:43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo:1364955Sample IDMB-32152SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID: <td>Analyte</td> <td>Result PQL SPK value SPK R</td> <td>ef Val %REC LowLimit</td> <td>HighLimit %RPD</td> <td>RPDLimit Qual</td> | Analyte | Result PQL SPK value SPK R | ef Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Sample ID MB-32173 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32173 RunNo: 43341 Prep Date: 6/8/2017 Analysis Date: 6/8/2017 SeqNo: 1364720 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Diesel Range Organics (DRO) ND 10 ND 50 Sumr: DNOP 8.9 10.00 89.4 70 130 Sample ID LCS-32152 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Sur:: DNOP 4.0 5.000 81.0 70 130 | Diesel Range Organics (DRO) | 43 10 50.00 | 0 85.6 73.2 | 114 | |
| Client ID:PBSBatch ID:32173RunNo:43341Prep Date:6/8/2017Analysis Date:6/8/2017SeqNo:1364720Units:mg/KgAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitDiesel Range Organics (DRO)ND10ND50Surr: DNOP8.910.0089.470130Sample IDLCS-32152SampType:LCSTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo:43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo:1364955Units:%RecAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitSample IDMB-32152SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:32152RunNo:43341Sample IDMB-32152SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:32152RunNo:43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo:1364956Units:%RecClient ID:PBSBatch ID:32152RunNo:43341Fere Date:%RecKRecAnalyteResultPQLSPK valueSPK Kef Val%RECLowLimitHighLimit%RPD | Surr: DNOP | 4.0 5.000 | 79.7 70 | 130 | |
| Prep Date:6/8/2017Analysis Date:6/8/2017SeqNo:1364720Units:mg/KgAnalyteResultPQLSPK valueSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitDiesel Range Organics (DRO)ND10ND50Sur: DNOP8.910.0089.470130Sample IDLCS-32152SampType:LCSTestCode:EPA Method8015M/D:Diesel RangeOrganicsClient ID:LCSSBatch ID:32152RunNo:43341 | Sample ID MB-32173 | SampType: MBLK | TestCode: EPA Method | 8015M/D: Diesel Range | Organics |
| Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Diesel Range Organics (DRO) ND 10 ND 50 ND 50 Surr: DNOP 8.9 10.00 89.4 70 130 130 Sample ID LCS-32152 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Surr: DNOP 4.0 5.000 81.0 70 130 Sample ID MB-32152 SampType: MEK TestCode: EPA Method 8015M/D: Diesel Range Organics Surr: DNOP 4.0 5.000 81.0 70 130 130 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: | Client ID: PBS | Batch ID: 32173 | RunNo: 43341 | | |
| Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 8.9 10.00 89.4 70 130 Sample ID LCS-32152 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Surr: DNOP 4.0 5.000 81.0 70 130 10 10 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics 10 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics 10 Client ID: PBS Batch ID: 32152 RunNo: 43341 10 10 10 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result | Prep Date: 6/8/2017 | Analysis Date: 6/8/2017 | SeqNo: 1364720 | Units: mg/Kg | |
| Motor Oil Range Organics (MRO) Surr: DNOPND50Surr: DNOP8.910.0089.470130Sample IDLCS-32152SampType: LCSTestCode: EPA Method 8015M/D: Diesel Range OrganicsClient ID:LCSSBatch ID:32152RunNo: 43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo: 1364955Units: %RecAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitSurr: DNOP4.05.00081.070130130130130Sample IDMB-32152SampType: MBLKTestCode: EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:32152RunNo: 43341Prep Date:6/7/2017Analysis Date:6/8/2017SeqNo: 1364956Units: %RecAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimit | Analyte | Result PQL SPK value SPK R | ef Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Surr: DNOP 8.9 10.00 89.4 70 130 Sample ID LCS-32152 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Method 8015M/D: Diesel Range Organics Method 8015M/D: Diesel Range Organics | Diesel Range Organics (DRO) | ND 10 | | | |
| Sample ID LCS-32152 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Surr: DNOP 4.0 5.000 81.0 70 130 70 130 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 0 | Motor Oil Range Organics (MRO) | ND 50 | | | |
| Client ID: LCSS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Mapped PDL Sur: DNOP 4.0 5.000 81.0 70 130 130 130 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics 130 Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Mapped | Surr: DNOP | 8.9 10.00 | 89.4 70 | 130 | |
| Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364955 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Surr: DNOP 4.0 5.000 81.0 70 130 100 100 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Sample ID LCS-32152 | SampType: LCS | TestCode: EPA Method | 8015M/D: Diesel Range (| Organics |
| Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Surr: DNOP 4.0 5.000 81.0 70 130 130 130 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics 0 Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Client ID: LCSS | Batch ID: 32152 | RunNo: 43341 | | |
| Surr: DNOP 4.0 5.000 81.0 70 130 Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 0 | Prep Date: 6/7/2017 | Analysis Date: 6/8/2017 | SeqNo: 1364955 | Units: %Rec | |
| Sample ID MB-32152 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 0 | Analyte | Result PQL SPK value SPK R | ef Val %REC LowLimit | HighLimit %RPD I | RPDLimit Qual |
| Client ID: PBS Batch ID: 32152 RunNo: 43341 Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit | Surr: DNOP | 4.0 5.000 | 81.0 70 | 130 | |
| Prep Date: 6/7/2017 Analysis Date: 6/8/2017 SeqNo: 1364956 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit %Red | Sample ID MB-32152 | SampType: MBLK | TestCode: EPA Method | 8015M/D: Diesel Range (| Organics |
| Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit (| Client ID: PBS | Batch ID: 32152 | RunNo: 43341 | | |
| | Prep Date: 6/7/2017 | Analysis Date: 6/8/2017 | SeqNo: 1364956 | Units: %Rec | |
| Surr: DNOP 9.0 10.00 90.2 70 130 | Analyte | Result PQL SPK value SPK R | ef Val %REC LowLimit | HighLimit %RPD F | RPDLimit Qual |
| | Surr: DNOP | 9.0 10.00 | 90.2 70 | 130 | |

Qualifiers:

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

09-Jun-17

Page 4 of 6

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering Project: MUDGE LS #6

| Sample ID MB-32166 | SampT | ype: ME | BLK | Tes | tCode: E | PA Method | 8015D: Gaso | oline Rang | e | |
|---|----------------------|------------------------------------|---------------|-------------|-----------------------|----------------|----------------------------|------------|---------------|------|
| Client ID: PBS | Batch | ID: 32 | 166 | F | RunNo: 4 | 3350 | | | | |
| Prep Date: 6/7/2017 | Analysis D | ate: 6/ | 8/2017 | S | SeqNo: 1 | 365346 | Units: mg/k | ٢g | | |
| 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 | | 102 | 54 | 150 | | | |
| | | | | | | | | | | |
| Sample ID LCS-32166 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015D: Gaso | oline Rang | e | |
| Sample ID LCS-32166 Client ID: LCSS | | ype: LC | | | tCode: El RunNo: 4 | | 8015D: Gaso | line Rang | e | |
| Sample ID LCS-32166 Client ID: LCSS Prep Date: 6/7/2017 | | ID: 32 | | R | | 3350 | 8015D: Gaso Units: mg/K | | e | |
| Client ID: LCSS Prep Date: 6/7/2017 | Batch | ID: 32 | 166 8/2017 | R | RunNo: 4 | 3350 | | | e RPDLimit | Qual |
| Client ID: LCSS | Batch Analysis Da | ID: 32 ' ate: 6 / | 166 8/2017 | R | RunNo: 4 SeqNo: 1 | 3350 365347 | Units: mg/K | (g | | Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- E 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

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09-Jun-17

| Hall Environmental | Analysis | Laboratory, | Inc. |
|--------------------|----------|-------------|------|
|--------------------|----------|-------------|------|

Client: Blagg Engineering **Project:** MUDGE LS #6

| Sample ID MB-32166 | SampT | ype: MI | BLK | Tes | tCode: El | PA Method | 8021B: Volat | tiles | | |
|--|---|--------------------------------|--|----------------------------|---------------------------------------|--------------------------------------|---------------------------------|-----------|----------|------|
| Client ID: PBS | Batch | n ID: 32 | 166 | F | RunNo: 4 | 3350 | | | | |
| Prep Date: 6/7/2017 | Analysis D | ate: 6/ | 8/2017 | S | SeqNo: 1 | 365358 | 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-Bromofluorobenzene | 1.3 | | 1.000 | | 127 | 66.6 | 132 | | | |
| Sample ID LCS-32166 | SampT | ype: LC | S | Test | Code: EF | PA Method | 8021B: Volat | iles | | |
| Client ID: LCSS | Detal | D: 32 | 400 | D | unNo: 4 | 3350 | | | | |
| | Dator | 110. 32 | 166 | | unito | | | | | |
| Prep Date: 6/7/2017 | Analysis D | | | | eqNo: 1 | | Units: mg/K | g | | |
| | | | 8/2017 | | | | Units: mg/K HighLimit | g %RPD | RPDLimit | Qual |
| Prep Date: 6/7/2017 | Analysis D | ate: 6/ | 8/2017 | S | eqNo: 1 | 365359 | - | - | RPDLimit | Qual |
| Prep Date: 6/7/2017 Analyte | Analysis D Result | eate: 6/ | 8/2017 SPK value | SPK Ref Val | eqNo: 1: %REC | 365359 LowLimit | HighLimit | - | RPDLimit | Qual |
| Prep Date: 6/7/2017 Analyte Benzene | Analysis D Result 1.0 | PQL 0.025 | 8/2017 SPK value 1.000 | SPK Ref Val | eqNo: 1: %REC 104 | 365359 LowLimit 80 | HighLimit 120 | - | RPDLimit | Qual |
| Prep Date: 6/7/2017 Analyte Benzene Toluene | Analysis D Result 1.0 1.0 | PQL 0.025 0.050 | 8/2017 SPK value 1.000 1.000 | SPK Ref Val 0 0 | eqNo: 1: <u>%REC</u> 104 105 | 365359 LowLimit 80 80 | HighLimit 120 120 | - | RPDLimit | Qual |
| Prep Date: 6/7/2017 Analyte Benzene Toluene Ethylbenzene | Analysis D Result 1.0 1.0 1.1 | PQL 0.025 0.050 0.050 | 8/2017 SPK value 1.000 1.000 1.000 | SPK Ref Val 0 0 0 | eqNo: 1: %REC 104 105 105 | 365359 LowLimit 80 80 80 | HighLimit 120 120 120 | - | RPDLimit | Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

W

- **Reporting Detection Limit** RL
 - Sample container temperature is out of limit as specified

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WO#: 1706415

09-Jun-17

| HALL ENVIRONMENT/ ANALYSIS LABORATORY | AL <i>TEL: 505-345-</i> | ental Analysis Laboratov 4901 Hawkins N Albuquerque, NM 8710 3975 FAX: 505-345-410 w.hallenvironmental.co. | | ple Log-In Ch | eck List |
|--|--|--|--|-----------------------------------|------------------|
| Client Name: BLAGG | Work Order Nun | nber: 1706415 | | RcptNo: 1 | |
| Received By: Anne Tho Completed By: Anne Tho | | AM AM | Anne Ham | - | |
| Reviewed By: SRC | 06/08/17 | | Conta prese | | |
| Chain of Custody | | | | | |
| 1. Custody seals intact on s | ample bottles? | Yes | No 🗔 | Not Present | |
| 2, Is Chain of Custody com | | Yes 🗹 | No 🗌 | Not Present | |
| How was the sample delivered. | | Courier | | | |
| Log In | | | | | |
| 4. Was an attempt made to | cool the samples? | Yes 🗹 | No 🗌 | NA 🗌 | |
| 5. Were all samples receive | d at a temperature of >0° C to 6.0°C | Yes 🗹 | No 🗌 | | |
| 6. Sample(s) in proper cont | ainer(s)? | Yes 🗹 | No 🗆 | | |
| 7. Sufficient sample volume | for indicated test(s)? | Yes 🖌 | No 🗌 | | |
| 8. Are samples (except VOA | and ONG) properly preserved? | Yes 🗹 | No 🗌 | _ | |
| 9. Was preservative added t | o bottles? | Yes | No 🗹 | NA 🗌 | |
| 10.VOA vials have zero head | ispace? | Yes | No 🗌 | No VOA Vials 🗹 | |
| 11. Were any sample contain | ers received broken? | Yes | No 🗹 | # of preserved bottles checked | |
| 12. Does paperwork match be (Note discrepancies on ch | | Yes 🗹 | No 🗌 ! | for pH: | 12 unless noted) |
| 13. Are matrices correctly ide | ntified on Chain of Custody? | Yes 🗹 | No 🗌 | Adjusted? | |
| 14. Is it clear what analyses w | vere requested? | Yes 🗹 | No 🗌 | | |
| 15. Were all holding times ab (If no, notify customer for | | Yes 🗹 | No 🗌 | Checked by: | |
| Special Handling (if app | olicable) | | | | |
| 16. Was client notified of all d | iscrepancies with this order? | Yes 🗌 | No 🗌 | NA 🗹 | |
| Person Notified: | Date | , | | | |
| By Whom: | Via: | eMail Pho | ne 🗌 Fax | In Person | |
| Regarding: Client Instructions: | a terre del proprio de la constante de la const I | WHTS 23, 3 d a Let Min an Lot of Date of Mark MARKAN | a da an anna an | | |
| 17. Additional remarks: | · | · | | | |
| 18. Cooler Information | | | | | |
| Cooler No Temp °C | Condition Seal Intact Seal No | Seal Date Si | gned By | | |
| 1 1.0 | Good Yes | | | | |

Page 1 of 1

| Cł | nain-c | of-Cus | tody Record | Turn-Around | lime: | JAME | | | | н | | | FI | NV | TE | 20 | | ИЕ | NT | | | |
|--|---|------------|---------------------------|-----------------------------------|---------------------|-----------------|---------|------------------------------|-----------------------------|--------------------|--------------------|------------------------|----------------------|-------------------------------|------------------------------|-------------|-----------------|--------------------------------|-----------------------|-------------|------------------|----------------------|
| Client: | BLAG | G ENGR. | / BP AMERICA | Standard | Rush _ | DAY | | | 5 | | | | | | | | | | T | | | |
| | | | | Project Name | 1 | | | | | | | | | | | | l.con | | | | | |
| Mailing A | ddress: | | | | MUDGE LS | #6 | | 10 | 01 H | awki | | | | | | | | | 0 | | | |
| | | A | | Project #: | | | | | | IS-34 | | | | | | | -410 | | 2 | | | |
| Phone #: | | (505) 32 | 0-1183 | | | | | 16 | 1. 24 | 3-34 | 0-31 | | | | - | ques | - | 1. | | | | |
| email or F | ax#: | (200) 02 | | Project Mana | aer; | | | | | | | | | | | 1 | | = | | | | |
| QAVQC Pa | And the second se | | | | | - | 6 | 5 | ô | | | | | SO4) | S'S | | | 300.1) | | | | |
| X Stand | - | | Level 4 (Full Validation) | | JEFF BLAG | G | (8021B) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | | | [2] | | Anions (F,Cl,NO3,NO2,PO4,SO4) | 8081 Pesticides / 8082 PCB's | | | | | | 0 | |
| Accredita | tion: | | | Sampler: | ELSON V | evez av | | (Ga | ORO | F | A | PAH (8310 or 8270SIMS) | | 102, | 3082 | | | Chloride (soil - 300.0 / water | | | composite sample | |
| | | D Other | | On Ice: | X Yes | D No | | TPH | 0/0 | TPH (Method 418.1) | EDB (Method 504.1) | 827(| | O3, h | 15 | | (A) | 0.00 | | | e sa | Air Bubbles (Y or N) |
| | Type) | 7 | | Sample Temp | erature: 1.0 | | | + 36 | (GR | pou | Por | JO. | etal | CI'N | cide | A | N-I | - | | 4 | osit | No |
| | | | 6. | Container | Preservative | | | MTR | 158 | Aeth | Aeth | 310 | RCRA 8 Metals | (F, | esti | 8260B (VOA) | 8270 (Semi-VOA) | e (so | | Grab sample | duc | bles |
| Date | Time | Matrix | Sample Request ID | Type and # | Туре | HEAL No. | X | EX + | H 80 | HC | BG | H (8 | RA | ions | 81 P | 608 | 70 (| orid | | sde | It, C | Bub |
| | | | | meather | | MOLE415 | BTEX | 81 | TPI | 4 L | 8 | PA | RC | An | 80 | 82 | 82 | 5 | | 5 | # pt. | Air |
| 6/7/17 | 1413 | SOIL | TSP-19 | 1-402. | Cool | 105 | V | | V | | | | | | | | | V | | | 5 | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 6/7/17 | 1421 | SOIL | T5P-20 | 1-402. | COOL | 203 | V | | V | | | | | | | | | V | | | 5 | |
| | | | | | | | | | entropic and | | | | | | | | | | | | | |
| | | | | And the state of the state of the | | | | | | | - | | | | | | | | | | | |
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| ARC 201 - 1 | | | | | | | | | | | | | | | - | - | | | | - | - | |
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| | | | с | | | | | | - | | | | | - | - | - | | | \vdash | _ | - | |
| | | | | | e vegetation of the | | - | | | | | | | | - | | | | | _ | | |
| | | | | | | 54 MILLO - 1677 | | | | | | | | | | | | | | _ | | |
| | | | | | | | | | | | | | _ | | | | | | | | | |
| And the second s | | | | | | | | | | | | | | | | | | | | _ | | |
| Date: | Time: | Relinquish | the stand | Received by: | | Date Time | Rer | narks | 5: | | | | | | | | N APP | | CORRE! | SPON | DING | VID, |
| 1/17 | 1600 | 16 | my | 1 West | at a | 1/1/1 1600 | 0 | ONT | ACT: | STEN | | | | nd ndr v fa | | | | | and the second second | | | |
| Date: | Time: | Relinquish | | Received by | 1 1 | Date Time | | | | VHD | KON | | | | | | | | | | | |
| 10/1/17 | 1852 | -1/1 | ust Water | 1 Cla | m-1 | - 0715 | W | 'BS EI | eme | nt: | - | L1- | 001 | BM-E | :ML | JDGE | LS6 | - | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accrecited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



June 13, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: Mudge LS 6

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

OrderNo.: 1706555

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/10/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical Report | |
|--------------------------|--|
| Lab Order 1706555 | |

Date Reported: 6/13/2017

-

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: | Blagg Engineering |
|----------------|-------------------|
| Project: | Mudge LS 6 |

Surr: Dibromofluoromethane

Surr: Toluene-d8

S

Client Sample ID: TSP-21 (101001E 0 50 00 D) (~ 11 ...

| Project: Mudge LS 6 | | | Collection | Date: 6/9/2017 2:50:00 PM |
|----------------------------------|---------|-------------|------------|--------------------------------|
| Lab ID: 1706555-001 | Matrix: | MEOH (SOIL) | Received | Date: 6/10/2017 11:15:00 AM |
| Analyses | Result | PQL Qua | l Units | DF Date Analyzed Batch |
| EPA METHOD 300.0: ANIONS | | | | Analyst: MRA |
| Chloride | ND | 30 | mg/Kg | 20 6/12/2017 11:37:38 AM 32225 |
| EPA METHOD 8015D MOD: GASOLINE | RANGE | | | Analyst: AG |
| Gasoline Range Organics (GRO) | 14 | 3.3 | mg/Kg | 1 6/12/2017 12:12:52 PM R43427 |
| Surr: BFB | 91.4 | 70-130 | %Rec | 1 6/12/2017 12:12:52 PM R43427 |
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.2 | mg/Kg | 1 6/12/2017 11:31:08 AM 32222 |
| Motor Oil Range Organics (MRO) | ND | 46 | mg/Kg | 1 6/12/2017 11:31:08 AM 32222 |
| Surr: DNOP | 98.5 | 70-130 | %Rec | 1 6/12/2017 11:31:08 AM 32222 |
| EPA METHOD 8260B: VOLATILES SHOP | RT LIST | | | Analyst: AG |
| Benzene | ND | 0.017 | mg/Kg | 1 6/12/2017 12:12:52 PM A43427 |
| Toluene | ND | 0.033 | mg/Kg | 1 6/12/2017 12:12:52 PM A43427 |
| Ethylbenzene | ND | 0.033 | mg/Kg | 1 6/12/2017 12:12:52 PM A43427 |
| Xylenes, Total | ND | 0.066 | mg/Kg | 1 6/12/2017 12:12:52 PM A43427 |
| Surr: 1,2-Dichloroethane-d4 | 110 | 70-130 | %Rec | 1 6/12/2017 12:12:52 PM A43427 |
| Surr: 4-Bromofluorobenzene | 96.0 | 70-130 | %Rec | 1 6/12/2017 12:12:52 PM A43427 |

70-130

70-130

%Rec

%Rec

1

1

6/12/2017 12:12:52 PM A43427

6/12/2017 12:12:52 PM A43427

114

108

| Refe | r to th | e QC Summary report and sample login checkli | st for flagg | ged QC data and preservation inform | ation. |
|-------------|---------|--|--------------|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method 1 | Blank |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 1 of 6 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | rage 1010 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |

% Recovery outside of range due to dilution or matrix

- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

| Hall E | nvironmental Anal | ysis Laborat | ory, Inc. | | | Lab Order 1706555 Date Reported: 6/13/202 | 17 |
|---------------------|--|--------------|-------------------------|-------|------------------|--|--------|
| Project: | Blagg Engineering Mudge LS 6 1706555-002 | Matrice | | | Date: 6/9 | /2017 2:56:00 PM | |
| Lab ID: Analyses | 1706555-002 | Result | IEOH (SOIL) PQL Qual | | | 0/2017 11:15:00 AM Date Analyzed | Batch |
| EPA MET | HOD 300.0: ANIONS | | | | | Analyst | MRA |
| Chloride | | ND | 30 | mg/Kg | 20 | 6/12/2017 11:50:03 AM | 32225 |
| EPA MET | HOD 8015D MOD: GASOL | INE RANGE | | | | Analyst | AG |
| Gasoline | Range Organics (GRO) | 17 | 3.4 | mg/Kg | 1 | 6/12/2017 12:42:48 PM | R43427 |
| Surr: E | BFB | 100 | 70-130 | %Rec | 1 | 6/12/2017 12:42:48 PM | R43427 |
| EPA MET | HOD 8015M/D: DIESEL RA | NGE ORGANICS | | | | Analyst: | TOM |
| Diesel Ra | ange Organics (DRO) | 11 | 9.6 | mg/Kg | 1 | 6/12/2017 11:59:10 AM | 32222 |
| Motor Oil | Range Organics (MRO) | ND | 48 | mg/Kg | 1 | 6/12/2017 11:59:10 AM | 32222 |
| Surr: D | DNOP | 93.9 | 70-130 | %Rec | 1 | 6/12/2017 11:59:10 AM | 32222 |
| EPA MET | HOD 8260B: VOLATILES S | SHORT LIST | | | | Analyst: | AG |
| Benzene | | ND | 0.017 | mg/Kg | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Toluene | | ND | 0.034 | mg/Kg | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Ethylben | zene | ND | 0.034 | mg/Kg | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Xylenes, | Total | 0.072 | 0.068 | mg/Kg | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Surr: 1 | ,2-Dichloroethane-d4 | 116 | 70-130 | %Rec | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Surr: 4 | -Bromofluorobenzene | 98.3 | 70-130 | %Rec | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Surr: D | Dibromofluoromethane | 124 | 70-130 | %Rec | 1 | 6/12/2017 12:42:48 PM | A43427 |
| Surr: T | oluene-d8 | 117 | 70-130 | %Rec | 1 | 6/12/2017 12:42:48 PM | A43427 |
| | | | | | | | |

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
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 6 J
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** Mudge LS 6

| sector in the second | | | | |
|---|---|--------------------------------------|-------------------------------|---------------|
| Sample ID MB-32225 | SampType: mblk | TestCode: EPA Method | 300.0: Anions | |
| Client ID: PBS | Batch ID: 32225 | RunNo: 43424 | | |
| Prep Date: 6/12/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367904 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-32225 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32225 Client ID: LCSS | SampType: Ics Batch ID: 32225 | TestCode: EPA Method RunNo: 43424 | 300.0: Anions | |
| | | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32225 Analysis Date: 6/12/2017 | RunNo: 43424 | | RPDLimit Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank B
- Value above quantitation range E
- 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 3 of 6

13-Jun-17

1706555

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:**

Mudge LS 6

| Sample ID LCS-32222 | SampType: LCS | TestCode: EPA Method | 8015M/D: Diesel Range Organics | | | | | | | |
|--------------------------------|--------------------------|---------------------------|--------------------------------|--------------|--|--|--|--|--|--|
| Client ID: LCSS | Batch ID: 32222 | RunNo: 43422 | | | | | | | | |
| Prep Date: 6/12/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367204 | Units: mg/Kg | | | | | | | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD R | PDLimit Qual | | | | | | |
| Diesel Range Organics (DRO) | 52 10 50.00 | 0 0 104 73.2 | 114 | | | | | | | |
| Surr: DNOP | 4.7 5.000 | 93.1 70 | 130 | | | | | | | |
| Sample ID MB-32222 | SampType: MBLK | 8015M/D: Diesel Range Or | rganics | | | | | | | |
| Client ID: PBS | Batch ID: 32222 | RunNo: 43422 | | | | | | | | |
| Prep Date: 6/12/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367205 | Units: mg/Kg | | | | | | | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD RI | PDLimit Qual | | | | | | |
| Diesel Range Organics (DRO) | ND 10 | | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND 50 | | | | | | | | | |
| Surr: DNOP | 9.6 10.00 | 96.0 70 | 130 | | | | | | | |
| Sample ID LCS-32210 | SampType: LCS | TestCode: EPA Method | 8015M/D: Diesel Range Or | ganics | | | | | | |
| Client ID: LCSS | Batch ID: 32210 | RunNo: 43422 | | | | | | | | |
| Prep Date: 6/9/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367518 | Units: %Rec | | | | | | | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD RF | PDLimit Qual | | | | | | |
| Surr: DNOP | 4.7 5.000 | 94.1 70 | 130 | | | | | | | |
| Sample ID MB-32210 | SampType: MBLK | TestCode: EPA Method | 8015M/D: Diesel Range Or | ganics | | | | | | |
| Client ID: PBS | Batch ID: 32210 | RunNo: 43422 | | | | | | | | |
| Prep Date: 6/9/2017 | Analysis Date: 6/12/2017 | SeqNo: 1367520 | Units: %Rec | | | | | | | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD RF | PDLimit Qual | | | | | | |
| Surr: DNOP | 9.2 10.00 | 91.9 70 | 130 | | | | | | | |

Qualifiers:

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

Page 4 of 6

13-Jun-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** Mudge LS 6

| Sample ID rb | SampType: MBLK TestCode: EPA Method | | | | | | 8260B: Vola | tiles Shor | t List | | | | | |
|-----------------------------|-------------------------------------|----------|-----------|--------------|----------|-----------|--------------|-------------|----------|------|--|--|--|--|
| Client ID: PBS | Batc | h ID: A4 | 3427 | RunNo: 43427 | | | | | | | | | | |
| Prep Date: | Analysis Date: 6/12/2017 | | | 5 | SeqNo: 1 | 367294 | Units: mg/Kg | | | | | | | |
| 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 | 0.54 | | 0.5000 | | 108 | 70 | 130 | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.52 | | 0.5000 | | 104 | 70 | 130 | | | | | | | |
| Surr: Dibromofluoromethane | 0.51 | | 0.5000 | | 103 | 70 | 130 | | | | | | | |
| Surr: Toluene-d8 | 0.51 | | 0.5000 | | 102 | 70 | 130 | | | | | | | |
| Sample ID 100ng Ics | SampT | ype: LC | S | Tes | Code: E | PA Method | 8260B: Vola | tiles Short | List | | | | | |
| Client ID: LCSS | Batch | n ID: A4 | 3427 | R | unNo: 4 | 3427 | | | | | | | | |
| Prep Date: | Analysis D |)ate: 6/ | 12/2017 | S | eqNo: 1 | 367295 | Units: mg/k | (g | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | | |
| Benzene | 0.99 | 0.025 | 1.000 | 0 | 98.8 | 70 | 130 | | | | | | | |
| Toluene | 0.83 | 0.050 | 1.000 | 0 | 83.2 | 70 | 130 | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 0.57 | | 0.5000 | | 113 | 70 | 130 | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.54 | | 0.5000 | | 107 | 70 | 130 | | | | | | | |
| Surr: Dibromofluoromethane | 0.53 | | 0.5000 | | 106 | 70 | 130 | | | | | | | |
| | 0.00 | | 0.0000 | | 100 | 10 | 100 | | | | | | | |
| Surr: Toluene-d8 | 0.52 | | 0.5000 | | 104 | 70 | 130 | | | | | | | |

Qualifiers:

- 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
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range E
- J Analyte detected below quantitation limits
- Ρ Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W

13-Jun-17

WO#: 1706555

Page 5 of 6

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** Mudge LS 6

| Sample ID rb | SampT | ype: ME | BLK | TestCode: EPA Method 8015D Mod: Gasoline Range | | | | | | | | |
|--|--|--------------------------|-----------------|--|----------------------|----------------|---------------------------|------------|-------------------|------|--|--|
| Client ID: PBS | Batch | ID: R4 | 3427 | F | RunNo: 4 | | | | | | | |
| Prep Date: | Analysis Date: 6/12/2017 | | | 5 | SeqNo: 1 | 367306 | Units: mg/K | | | | | |
| Analyte | Result PQL SPK value SPK Ref Val %REC LowLimit | | HighLimit | %RPD | RPDLimit | Qual | | | | | | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | | | |
| Surr: BFB | 490 | | 500.0 | | 97.4 | 70 | 130 | | | | | |
| Sample ID 2.5ug gro ics SampType: LCS TestCode: EPA Method 8015D Mod: Gasoline Range | | | | | | | | | | | | |
| Sample ID 2.5ug gro Ics | SampT | ype: LC | S | Tes | tCode: E | PA Method | 8015D Mod: | Gasoline I | Range | | | |
| Sample ID 2.5ug gro Ics Client ID: LCSS | | ype: LC | | | tCode: EF | | 8015D Mod: | Gasoline I | Range | | | |
| | | ID: R4 | | F | | 3427 | 8015D Mod: Units: mg/K | | Range | | | |
| Client ID: LCSS | Batch | ID: R4 | 3427 12/2017 | F | RunNo: 4 | 3427 | | | Range RPDLimit | Qual | | |
| Client ID: LCSS Prep Date: | Batch Analysis D | ID: R4 ate: 6/ | 3427 12/2017 | F S | RunNo: 4 SeqNo: 1 | 3427 367677 | Units: mg/K | g | U | Qual | | |

WO#:

Page 6 of 6

1706555

13-Jun-17

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W

- - Sample pH Not In Range

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | Hall Environmental A Albuc TEL: 505-345-3975 I Website: www.hal | 4901 Hawkins guerque, NM 871 FAX: 505-345-41 | NE 109 Sam | ple Log-In C | heck List |
|---|--|--|---|-----------------------------------|---------------------|
| Client Name: BLAGG | Work Order Number: | 1706555 | | RcptNo: | 1 |
| Received By: Andy Freeman Completed By: Ashley Gallegos Reviewed By: SRC 06/12/1 | 6/10/2017 11:15:00 AM 6/12/2017 8:29:40 AM ~] | | and y | | |
| 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 | | | |
| Log In | | | | | |
| 4. Was an attempt made to cool the samples? | | Yes 🗹 | No 🗌 | NA 🗆 | |
| 5. Were all samples received at a temperature | 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) propert | y 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 broke | n? | Yes | No 🗹 | # of preserved bottles checked | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes 🗹 | No 🗌 | for pH: (<2 o | r >12 unless noted) |
| 13. Are matrices correctly identified on Chain of 0 | Custody? | 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) | | | | | |
| 16, Was client notified of all discrepancies with th | is order? | Yes | No 🗌 | NA 🔽 | |
| Person Notified: | Date | | | | |
| By Whom: | Via: | eMail 🗌 Ph | none 🗌 Fax | In Person | |
| Regarding: | MARKENARRENTEL TAN MENTER A CO. CO. | A STATE WAS CONTRACTED IN CONTRACTION. | A CONTRACTOR OF A DESCRIPTION OF A DESCRIPT | Liel | |
| Client Instructions: | | | | | |
| | | | | | |
| | I Intact Seal No Se | eal Date | Signed By | | |
| 1 2.8 Good Yes Page 1 of 1 | ··· . | / | | <u>-</u> | |
| | | | | | |

| Chain-of-Custody Record | | Turn-Around | SAMIE Dar | HALL ENVIRONMENTAL | | | | | | | | | | | | | | | | | |
|--------------------------------------|--|---------------------------|---------------------------|-------------------------|---------------------------|----------------------------|------------------------------------|---|-----------|--------------------|--------------------|---------------------|---------------|---|------------------------|-------------|-----------------|----------|-------|-----|----------------------|
| | Client: BP AMERICA | | Standard Project Name | ANALYSIS LABORATORY | | | | | | | | | | | | | | | | | |
| - | BLAGO | ENGU | BERWG INC. | | www.hallenvironmental.com | | | | | | | | | | | | | | | | |
| Mailing | Address: | | | MUDGE LS 6 | | | | 4901 Hawkins NE - Albuquerque, NM 87109 | | | | | | | | | | | | | |
| | 1 and the second se | | Project #: | | | | Tel. 505-345-3975 Fax 505-345-4107 | | | | | | | | | | | | | | |
| Phone #: (505) 320- 1183 | | 1 | | | | | | | | and the second | - | Constitution of | | uest | - | | | | | | |
| email or Fax#: | | Project Mana | ger: | | | () | 0 | 1 | | | | 4) | | | | | | | | | |
| QA/QC Package: | | 1 | EVE MOSK | 6-1 | (8021) | LO S | MR | Tradition Control of | | - | | SC, | PCB's | | | | | | | | |
| Standard Level 4 (Full Validation) | | 516 | INC INVIN | 10 | 5 (8) | (Ga | DRO / MRO) | AND DESCRIPTION OF A | | SIMS) | | PO | PC | | | | | | | | |
| Accreditation | | Sampler: | TERE BLAG | 16 | THE S | TPH (Gas only) | PF | = | ÷ | 70.5 | | 02 | 082 | | | | | | H | | |
| NELAP Other | | On Ice: | | | | 1 + | (GRO / I | 18. | 04. | 82 | | 1º0 | s / 8 | | (Y | | | | N N | | |
| EDD (Type) | | Sample Temperature: 2.8°(| | | | B | 9 | 0d 4 | DQ D | 0 0 | stals | Ž | ide | 8 | 2 | 14.) | | | 2 | | |
| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL NO. | BTEX + MITH | BTEX + MTBE | TPH 8015B | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 | RCRA 8 Metals | Arions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 | 8260B (VOA) | 8270 (Semi-VOA) | CHURRINE | | | Air Ruhhles (Y nr N) |
| 6/9/200 | 1450 | SOIL | TSP-21 | 402×1 | CEOL | - 001 | X | | X | | | | | | | | | X | | | _ |
| A | 1452 | 15 | T3P-22 | N | łt | -002 | X | | × | | | | | | | | | X | | | _ |
| | | | | | | | | | | | | | | | | - | | | | | _ |
| | | | | | | | | | | | | | | | | | | | | | - |
| | | | | | | | | | | | | | > | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | - |
| | | | | | | | | | | | | | - | - | | - | - | | | + | _ |
| Date: | Time: (730 | Relinquist | Blagg | Received by: | ip | Bate Time 6/10/17 1115- | | narks | V | D: | VH | IXDA | DO | m | | | | | Musik | :AL | |
| Date: Time: Relinquished by: | | | Received by: | | Date Time | | AMP | | | | | | | | _ | 10.91 | ~ | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

June 15, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1706732

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/14/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Lab Order 1706732

Date Reported: 6/15/2017

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering | | | Client Samp | le ID: TS | SP-23 | |
|--------------------------------------|-----------|-------|-------------|-----------|-------------------------|-------|
| Project: MUDGE LS 6 | | | Collection | Date: 6/1 | 13/2017 2:02:00 PM | |
| Lab ID: 1706732-001 | Matrix: S | SOIL | Received | Date: 6/1 | 4/2017 7:50:00 AM | |
| | | | | | | |
| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch |
| Analyses EPA METHOD 300.0: ANIONS | Result | PQL Q | ual Units | DF | Date Analyzed Analys | |

| | | | | 0.0 | | | |
|----------------------------------|----------|----------|---|-------|---|----------------------|-------|
| EPA METHOD 8015M/D: DIESEL RANGE | ORGANICS | S | | | | Analyst | TOM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/14/2017 9:42:39 AM | 32271 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 6/14/2017 9:42:39 AM | 32271 |
| Surr: DNOP | 96.2 | 70-130 | | %Rec | 1 | 6/14/2017 9:42:39 AM | 32271 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | 17 | 3.6 | | mg/Kg | 1 | 6/14/2017 9:31:17 AM | 32257 |
| Surr: BFB | 388 | 54-150 | S | %Rec | 1 | 6/14/2017 9:31:17 AM | 32257 |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst | NSB |
| Benzene | ND | 0.018 | | mg/Kg | 1 | 6/14/2017 9:31:17 AM | 32257 |
| Toluene | ND | 0.036 | | mg/Kg | 1 | 6/14/2017 9:31:17 AM | 32257 |
| Ethylbenzene | ND | 0.036 | | mg/Kg | 1 | 6/14/2017 9:31:17 AM | 32257 |
| Xylenes, Total | ND | 0.071 | | mg/Kg | 1 | 6/14/2017 9:31:17 AM | 32257 |
| Surr: 4-Bromofluorobenzene | 120 | 66.6-132 | | %Rec | 1 | 6/14/2017 9:31:17 AM | 32257 |

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
- R RPD outside accepted recovery limits
- % 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 1 of 5 J
- Ρ Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-32282 | SampType: mblk | TestCode: EPA Method | 300.0: Anions | |
|--|---|--------------------------------------|-------------------------------|---------------|
| Client ID: PBS | Batch ID: 32282 | RunNo: 43485 | | |
| Prep Date: 6/14/2017 | Analysis Date: 6/14/2017 | SeqNo: 1370344 | Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit | HighLimit %RPD | RPDLimit Qual |
| Chloride | ND 1.5 | | | |
| | | | | |
| Sample ID LCS-32282 | SampType: Ics | TestCode: EPA Method | 300.0: Anions | |
| Sample ID LCS-32282 Client ID: LCSS | SampType: Ics Batch ID: 32282 | TestCode: EPA Method RunNo: 43485 | 300.0: Anions | |
| | | | 300.0: Anions Units: mg/Kg | |
| Client ID: LCSS | Batch ID: 32282 Analysis Date: 6/14/2017 | RunNo: 43485 | | RPDLimit Qual |

WO#:

Page 2 of 5

1706732

15-Jun-17

Qualifiers:

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

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID LCS-32271 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
|--|--------------|-----------|--------------------|-------------|--------------|----------------|------------------|------------|------------|------|
| Client ID: LCSS | Batch | ID: 32 | 271 | F | RunNo: 4 | 3444 | | | | |
| Prep Date: 6/14/2017 | Analysis D | ate: 6/ | 14/2017 | S | SeqNo: 1 | 369340 | Units: mg/M | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 53 | 10 | 50.00 | 0 | 105 | 73.2 | 114 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 96.7 | 70 | 130 | | | |
| Sample ID MB-32271 | SampT | ype: ME | BLK | Test | tCode: El | PA Method | 8015M/D: Die | esel Range | e Organics | |
| Client ID: PBS | Batch | ID: 32 | 271 | R | RunNo: 4 | 3444 | | | | |
| Prep Date: 6/14/2017 | Analysis D | ate: 6/ | 14/2017 | S | SeqNo: 1 | 369341 | Units: mg/K | g | | |
| | | | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | Result ND | PQL 10 | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) | | | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| esel Range Organics (DRO) | ND | 10 | SPK value 10.00 | SPK Ref Val | %REC 91.7 | LowLimit 70 | HighLimit 130 | %RPD | RPDLimit | Qual |

Qualifiers:

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

WO#: 1706732

15-Jun-17

Page 3 of 5

QC SUMMARY REPORT

| Hall Environmental | Analysis | Laboratory, | Inc. |
|--------------------|----------|-------------|------|
|--------------------|----------|-------------|------|

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-32257 | SampType: MBLK | Tes | tCode: EPA Method | 8015D: Gasoline | Range | |
|-------------------------------|------------------------|-------------------|---------------------|-----------------|--------------|------|
| Client ID: PBS | Batch ID: 32257 | 1 | RunNo: 43490 | | | |
| Prep Date: 6/13/2017 | Analysis Date: 6/14/20 | 17 | SeqNo: 1370009 | 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 | 960 | 1000 | 95.9 54 | 150 | | |
| Sample ID LCS-32257 | SampType: LCS | Tes | tCode: EPA Method | 8015D: Gasoline | Range | |
| Client ID: LCSS | Batch ID: 32257 | F | RunNo: 43490 | | | |
| Prep Date: 6/13/2017 | Analysis Date: 6/14/20 | 17 5 | SeqNo: 1370010 | Units: mg/Kg | | |
| Analyte | Result PQL SPK | value SPK Ref Val | %REC LowLimit | HighLimit % | RPD RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25 5.0 | 25.00 0 | 100 76.4 | 125 | | |
| Surr: BFB | 1000 | 1000 | 103 54 | 150 | | |
| Sample ID MB-32244 | SampType: MBLK | Tes | tCode: EPA Method | 8015D: Gasoline | Range | |
| Client ID: PBS | Batch ID: 32244 | F | RunNo: 43491 | | | |
| Prep Date: 6/13/2017 | Analysis Date: 6/14/20 | 17 5 | SeqNo: 1370036 | Units: %Rec | | |
| Analyte | Result PQL SPK | value SPK Ref Val | %REC LowLimit | HighLimit % | RPD RPDLimit | Qual |
| Surr: BFB | 1100 | 1000 | 110 54 | 150 | | |
| Sample ID LCS-32244 | SampType: LCS | Tes | tCode: EPA Method | 8015D: Gasoline | Range | |
| Client ID: LCSS | Batch ID: 32244 | F | RunNo: 43491 | | | |
| Prep Date: 6/13/2017 | Analysis Date: 6/14/20 | 17 5 | SeqNo: 1370037 | Units: %Rec | | |
| Analyte | Result PQL SPK | value SPK Ref Val | %REC LowLimit | HighLimit % | RPD RPDLimit | Qual |
| Surr: BFB | 1200 | 1000 | 119 54 | 150 | | |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В 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

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15-Jun-17

WO#: 1706732

Client: **Blagg Engineering Project:** MUDGE LS 6

| Sample ID MB-32257 | Samp | Туре: МЕ | BLK | Tes | tCode: El | PA Method | 8021B: Volat | tiles | | |
|----------------------------|------------|-----------|-----------|-------------|-----------|-----------|--------------|-------|----------|------|
| Client ID: PBS | Batc | h ID: 32 | 257 | F | RunNo: 4 | 3490 | | | | |
| Prep Date: 6/13/2017 | Analysis I | Date: 6/ | 14/2017 | 5 | SeqNo: 1 | 370018 | 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-Bromofluorobenzene | 1.2 | | 1.000 | | 123 | 66.6 | 132 | | | |
| Sample ID LCS-32257 | Samp | Type: LC | S | Tes | Code: EF | PA Method | 8021B: Volat | iles | | |
| Client ID: LCSS | Batc | h ID: 32 | 257 | F | unNo: 4 | 3490 | | | | |
| Prep Date: 6/13/2017 | Analysis [| Date: 6/ | 14/2017 | S | eqNo: 1 | 370019 | Units: mg/K | g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 105 | 80 | 120 | | | |
| Toluene | 1.1 | 0.050 | 1.000 | 0 | 106 | 80 | 120 | | | |
| Ethylbenzene | 1.1 | 0.050 | 1.000 | 0 | 106 | 80 | 120 | | | |
| Xylenes, Total | 3.2 | 0.10 | 3.000 | 0 | 108 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.2 | | 1.000 | | 125 | 66.6 | 132 | | | |
| Sample ID MB-32244 | Samp | Гуре: МЕ | BLK | Test | Code: EF | A Method | 8021B: Volat | iles | | |
| Client ID: PBS | Batcl | h ID: 322 | 244 | R | unNo: 43 | 3491 | | | | |
| Prep Date: 6/13/2017 | Analysis D | Date: 6/ | 14/2017 | S | eqNo: 13 | 370062 | Units: %Rec | ; | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 108 | 66.6 | 132 | | | |
| Sample ID LCS-32244 | SampT | Type: LC | S | Test | Code: EF | A Method | 8021B: Volat | iles | | |
| Client ID: LCSS | Batch | h ID: 322 | 244 | R | unNo: 43 | 3491 | | | | |
| Prep Date: 6/13/2017 | Analysis D | Date: 6/* | 14/2017 | S | eqNo: 13 | 370063 | Units: %Rec | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 111 | 66.6 | 132 | | | |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- J Analyte detected below quantitation limits
 - Sample pH Not In Range
- RL **Reporting Detection Limit**

Ρ

W Sample container temperature is out of limit as specified Page 5 of 5

15-Jun-17

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | TEL: 505-345-3975 | 4901 Hawkins I guergue, NM 871 | ^{VE} 09 Sam 07 | ple Log-In C | heck List |
|---|--|-----------------------------------|--------------------------------------|--------------------------------|-------------------|
| Client Name: BLAGG | Work Order Number: | 1706732 | | RcptNo: | 1 |
| Received By: Anne Thome Completed By: Anne Thome Reviewed By: | 6/14/2017 7:50:00 AM 6/14/2017 8:37:52 AM | | Anne Home Anne Home | | |
| Chain of Custody 1. Custody seals intact on sample bottle 2. Is Chain of Custody complete? 3. How was the sample delivered? | is? | Yes □ Yes ☑ <u>Client</u> | No 🗌 No 🗍 | Not Present 🗹 Not Present 🗌 | |
| Log In 4. Was an attempt made to cool the same | nples? | Yes 🗹 | No 🗌 | NA 🗌 | |
| 5. Were all samples received at a tempe | erature of >0° C to 6.0°C | Yes 🗹 | No 🗌 | NA 🗌 | |
| 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) | property 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 | l broken? | Yes | No 🗹 | # of preserved bottles checked | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custo | dy) | Yes 🗹 | No 🗆 | for pH: (<2 or | >12 unless noted) |
| 13. Are matrices correctly identified on Ch | ain of Custody? | Yes 🗹 | No 🗌 | Adjusted? | |
| 14. Is it clear what analyses were request 15. Were all holding times able to be method (If no, notify customer for authorization) | ? | Yes 🗹 Yes 🗹 | | Checked by: | |
| Special Handling (if applicable) 16. Was client notified of all discrepancies | with this order? | Yes | No 🗌 | NA 🗹 | |
| Person Notified: By Whom: Regarding: Client Instructions: | Date Via: |]eMail 🗌 Ph | one 🗌 Fax | In Person | |

,

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.5 | Good | Yes | | | |

Page 1 of 1

| | | MERICA | stody Record | □ Standard | Rush | SAME | | | | | | | | | _ | | | | | | |
|----------------------|-------------------|------------|---------------------------|---|----------------------|---|--|--------------|-------------|-----------------------------|--------------------|--------------------|---------------------|-----------------------|---|------------------------|-------------------|-----------------|----------|------|-----|
| | 2 | T | · · · · · · | Project Name | | | | | | | | | | | | | | | KA | ΓΟΙ | K |
| Mailing | Address | ENGIN | Jeens Inc | - | DGE L | 56 | | | 49 | 01 H | awki | | | | | | al.co | | 109 | | |
| | | | | Project #: | | | | 1 | | | 5-34 | | | | | | 345- | | | | |
| Phone | #: (Se | 05)3 | 20-1103 | 1 | | | | | | | | 0.00 | - | and the second second | | Req | COLUMN TWO IS NOT | 1101 | | | |
| | or Fax#: | | | Project Mana | ger: | and an international system of the second system of the second system of the second system of the second system | | | only) | 0 | | | | | (4) | | | | | | T |
| | Package: ndard | | Level 4 (Full Validation) | STE | ve Mask | HL | | HMB's (8021) | Gas or | O / MR | | | SIMS) | | PO4,SC | PCB's | | | | | |
| - | litation | - | sr | Sampler: | TEFF BUA | 66 🗆 No | | | + TPH (Gas | KO / DR | (1.8) | 04.1) | 8270 S | | 3,NO2, | / 8082 | | (8 | | | |
| | O (Type) | | | Service John | | S | A STATE OF STATE | | | (GR | d 41 | od 5(| or | tals | I'NC | ides | 2 | Š. | 14 | | |
| Date | Time | Matrix | Sample Request ID | Art of 14/17 Container Type and # M1.04 kd | Preservative Type | HEAL | Network | BTEX + MTBE | BTEX + MTBE | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 | RCRA 8 Metals | Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | |
| 13/17 | 1402 | SOIL | TSP-23 | 407 ×1 | COOL | | 201 | X | | X | | | | _ | | | | | X | | - |
| | | | | | | | | | | | | | | | | | | | | | - |
| | | | | | | | | | | | | - | | | | | | _ | _ | _ | |
| Ballion Advances and | | | | | | | • | | | | | | | | | | | | | | - |
| 1 | | | | | | | and a start of the | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | - |
| | | | | · · | | | | - | | | | | | _ | | | | | + | + | _ |
| Deter | Time | Delicentet | | Deschurd hur | <u>t</u> | Data | Time | | | | | | | | | | | | | 1 | - |
| Date: | 1448 | Relinquish | 1 Blegg | Received by: | LANT | - 11 | 1449 | | mark | V | 12: | Vł | | | VR | 4 | | | | Nost | |
| Date: | Time: | Relinquist | stullaton | Received by: | 10 | Date G / I. 4/17 07 5.7 | Time | 1 | | | | | | 4 | | | 18M | -E | Mid | Gels | R.A |



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

June 23, 2017

Steven Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: MUDGE LS 6

OrderNo.: 1706B08

Dear Steven Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/21/2017 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Lab Order 1706B08

Date Reported: 6/23/2017

Hall Environmental Analysis Laboratory, Inc.

| EPA METHOD 300.0: ANIONS Chloride ND 30 mg/Kg 20 6/2* EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Diesel Range Organics (DRO) ND 10 mg/Kg 1 6/2* Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/2* Surr: DNOP 104 70-130 %Rec 1 6/2* EPA METHOD 8015D: GASOLINE RANGE E 1 6/2* Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2* | | |
|---|--------------------|-------|
| Lab ID:1706B08-001Matrix:SOILReceived Date:6/21/20AnalysesResultPQLQualUnitsDFDatEPA METHOD 300.0:ANIONS ChlorideND30mg/Kg206/21EPA METHOD 8015M/D:DIESEL RANGE ORGANICSUnitsDFDatDiesel Range Organics (DRO)ND10mg/Kg16/21Motor Oil Range Organics (MRO)ND50mg/Kg16/22Surr: DNOP10470-130%Rec16/22EPA METHOD 8015D:GASOLINE RANGEUnitsImg/Kg56/21Gasoline Range Organics (GRO)ND18mg/Kg56/22EPA METHOD 8021B:VOLATILESImg/Kg56/22BenzeneND0.089mg/Kg56/22 | ł | |
| AnalysesResultPQLQualUnitsDFDatEPA METHOD 300.0: ANIONS ChlorideND30mg/Kg206/2*EPA METHOD 8015M/D: DIESEL RANGE ORGANICSDiesel Range Organics (DRO)ND10mg/Kg16/2*Motor Oil Range Organics (MRO)ND50mg/Kg16/2*Surr: DNOP10470-130%Rec16/2*EPA METHOD 8015D: GASOLINE RANGEGasoline Range Organics (GRO)ND18mg/Kg56/2*EPA METHOD 8021B: VOLATILESBenzeneND0.089mg/Kg56/2* | 17 2:07:00 PM | |
| EPA METHOD 300.0: ANIONS Chloride ND 30 mg/Kg 20 6/2* EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Diesel Range Organics (DRO) ND 10 mg/Kg 1 6/2* Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/2* Surr: DNOP 104 70-130 %Rec 1 6/2* EPA METHOD 8015D: GASOLINE RANGE E 1 6/2* Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* EPA METHOD 8021B: VOLATILES 117 54-150 %Rec 5 6/2* | 17 7:45:00 AM | |
| Chloride ND 30 mg/Kg 20 6/2* EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Diesel Range Organics (DRO) ND 10 mg/Kg 1 6/2* Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/2* Surr: DNOP 104 70-130 %Rec 1 6/2* EPA METHOD 8015D: GASOLINE RANGE U 0 70-130 %Rec 1 6/2* Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* Surr: BFB 117 54-150 %Rec 5 6/2* EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2* | e Analyzed | Batch |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Diesel Range Organics (DRO) ND 10 mg/Kg 1 6/2* Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/2* Surr: DNOP 104 70-130 %Rec 1 6/2* EPA METHOD 8015D: GASOLINE RANGE E 5 6/2* Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* Surr: BFB 117 54-150 %Rec 5 6/2* EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2* | Analyst: | MRA |
| Diesel Range Organics (DRO) ND 10 mg/Kg 1 6/2* Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/2* Surr: DNOP 104 70-130 %Rec 1 6/2* EPA METHOD 8015D: GASOLINE RANGE V V 10 18 mg/Kg 5 6/2* Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* Surr: BFB 117 54-150 %Rec 5 6/2* EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2* | 1/2017 10:56:35 AM | 32409 |
| Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 6/2" Surr: DNOP 104 70-130 %Rec 1 6/2" EPA METHOD 8015D: GASOLINE RANGE Volation ND 18 mg/Kg 5 6/2" Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2" Surr: BFB 117 54-150 %Rec 5 6/2" EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2" | Analyst: | том |
| Surr: DNOP 104 70-130 %Rec 1 6/2* EPA METHOD 8015D: GASOLINE RANGE ND 18 mg/Kg 5 6/2* Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* Surr: BFB 117 54-150 %Rec 5 6/2* EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2* | 1/2017 10:08:04 AM | 32406 |
| EPA METHOD 8015D: GASOLINE RANGE ND 18 mg/Kg 5 6/21 Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/21 Surr: BFB 117 54-150 %Rec 5 6/21 EPA METHOD 8021B: VOLATILES Benzene ND 0.089 mg/Kg 5 6/21 | 1/2017 10:08:04 AM | 32406 |
| Gasoline Range Organics (GRO) ND 18 mg/Kg 5 6/2* Surr: BFB 117 54-150 %Rec 5 6/2* EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/2* | 1/2017 10:08:04 AM | 32406 |
| Surr: BFB 117 54-150 % Rec 5 6/21 EPA METHOD 8021B: VOLATILES ND 0.089 mg/Kg 5 6/21 | Analyst: | NSB |
| EPA METHOD 8021B: VOLATILES Benzene ND 0.089 mg/Kg 5 6/21 | 1/2017 10:27:27 AM | 32396 |
| Benzene ND 0.089 mg/Kg 5 6/21 | 1/2017 10:27:27 AM | 32396 |
| | Analyst: | NSB |
| Toluene ND 0.18 mg/Kg 5 6/21 | 1/2017 10:27:27 AM | 32396 |
| | 1/2017 10:27:27 AM | 32396 |
| Ethylbenzene ND 0.18 mg/Kg 5 6/21 | 1/2017 10:27:27 AM | 32396 |
| Xylenes, Total ND 0.35 mg/Kg 5 6/21 | 1/2017 10:27:27 AM | 32396 |
| Surr: 4-Bromofluorobenzene 125 66.6-132 %Rec 5 6/21 | 1/2017 10:27:27 AM | 32396 |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В |
|-------------|----|--|---|
| | D | Sample Diluted Due to Matrix | E |
| | H | Holding times for preparation or analysis exceeded | J |
| | ND | Not Detected at the Reporting Limit | Р |
| | | | |

- 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 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1706B08

Date Reported: 6/23/2017

-

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: Blagg Engineering | | | Client Sampl | e ID: TS | P-25 | |
|--------------------------------|------------|----------|--------------|-----------|-----------------------|---------|
| Project: MUDGE LS 6 | | | Collection | Date: 6/2 | 20/2017 2:15:00 PM | |
| Lab ID: 1706B08-002 | Matrix: | SOIL | Received] | Date: 6/2 | 21/2017 7:45:00 AM | |
| Analyses | Result | PQL Q | ual Units | DF | Date Analyzed | Batch |
| EPA METHOD 300.0: ANIONS | | | | | Analys | t: MRA |
| Chloride | ND | 30 | mg/Kg | 20 | 6/21/2017 11:08:59 AM | 1 32409 |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | S | | | Analys | t: TOM |
| Diesel Range Organics (DRO) | 14 | 9.8 | mg/Kg | 1 | 6/21/2017 10:30:17 AN | 1 32406 |
| Motor Oil Range Organics (MRO) | ND | 49 | mg/Kg | 1 | 6/21/2017 10:30:17 AN | 32406 |
| Surr: DNOP | 102 | 70-130 | %Rec | 1 | 6/21/2017 10:30:17 AM | 32406 |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | | Analys | : NSB |
| Gasoline Range Organics (GRO) | ND | 19 | mg/Kg | 5 | 6/21/2017 10:51:25 AN | 32396 |
| Surr: BFB | 113 | 54-150 | %Rec | 5 | 6/21/2017 10:51:25 AM | 32396 |
| EPA METHOD 8021B: VOLATILES | | | | | Analys | NSB |
| Benzene | ND | 0.096 | mg/Kg | 5 | 6/21/2017 10:51:25 AN | 32396 |
| Toluene | ND | 0.19 | mg/Kg | 5 | 6/21/2017 10:51:25 AN | 32396 |
| Ethylbenzene | ND | 0.19 | mg/Kg | 5 | 6/21/2017 10:51:25 AN | 32396 |
| Xylenes, Total | ND | 0.39 | mg/Kg | 5 | 6/21/2017 10:51:25 AN | 32396 |
| Surr: 4-Bromofluorobenzene | 119 | 66.6-132 | %Rec | 5 | 6/21/2017 10:51:25 AN | 32396 |

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

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method Blank | |
|-------------|-----|---|----|---|-----|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits Page 2 of | F 6 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | . 0 |
| | PQL | Practical Quanitative Limit | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified | l |
| | | | | | |

Client: Blagg Engineering MUDGE LS 6 **Project:**

| Sample ID MB-32409 | SampType: mblk | TestCode: EPA Method 300.0: Anions | |
|--|---|--|----|
| Client ID: PBS | Batch ID: 32409 | RunNo: 43687 | |
| Prep Date: 6/21/2017 | Analysis Date: 6/21/2017 | SeqNo: 1377078 Units: mg/Kg | |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu | al |
| Chloride | ND 1.5 | | |
| | | | |
| Sample ID LCS-32409 | SampType: Ics | TestCode: EPA Method 300.0: Anions | |
| Sample ID LCS-32409 Client ID: LCSS | SampType: Ics Batch ID: 32409 | TestCode: EPA Method 300.0: Anions RunNo: 43687 | |
| | 1 21 | | |
| Client ID: LCSS | Batch ID: 32409 Analysis Date: 6/21/2017 | RunNo: 43687 | al |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- 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
- В Analyte detected in the associated Method Blank
- Value above quantitation range Е
- J Analyte detected below quantitation limits
- Ρ Sample pH Not In Range
- **Reporting Detection Limit** RL
- W Sample container temperature is out of limit as specified

Page 3 of 6

WO#: 1706B08 23-Jun-17

Client: Blagg Engineering Project: MUDGE LS 6

| Sample ID LCS-32406 | SampT | SampType: LCS | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
|--------------------------------|------------|------------------------------|-----------|-------------|---|-----------|-------------|-----------|------------|------|
| Client ID: LCSS | Batch | Batch ID: 32406 RunNo: 43676 | | | | | | | | |
| Prep Date: 6/21/2017 | Analysis D | ate: 6/ | 21/2017 | Ś | SeqNo: 1 | 375835 | Units: mg/k | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47 | 10 | 50.00 | 0 | 93.5 | 73.2 | 114 | | | |
| Surr: DNOP | 4.9 | | 5.000 | | 97.2 | 70 | 130 | | | |
| Sample ID MB-32406 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
| Client ID: PBS | Batch | ID: 32 | 406 | F | RunNo: 4 | 3676 | | | | |
| Prep Date: 6/21/2017 | Analysis D | ate: 6/ | 21/2017 | S | SeqNo: 1 | 375836 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| | | | | | | | | | | |

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- 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 6

23-Jun-17

WO#: 1706B08

Client: Blagg Engineering MUDGE LS 6 **Project:**

| Sample ID MB-32396 | SampT | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
|---|---------------------|------------------------|---------------------|-------------|--|-----------------------------|----------------------------|-----------|---------------|------|
| Client ID: PBS | Batch | n ID: 32 | 396 | F | RunNo: 4 | 3702 | | | | |
| Prep Date: 6/20/2017 | Analysis D | ate: 6/ | 21/2017 | 5 | SeqNo: 1 | 376444 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 990 | | 1000 | | 98.7 | 54 | 150 | | | |
| | | | | | | • • | | | | |
| Sample ID LCS-32396 | SampT | ype: LC | | Tes | | | 8015D: Gaso | line Rang | e | |
| Sample ID LCS-32396 Client ID: LCSS | | ype: LC | S | | | PA Method | | line Rang | e | |
| | | n ID: 32: | S | F | tCode: E | PA Method 3702 | | | e | |
| Client ID: LCSS | Batch | n ID: 32: | S 396 21/2017 | F | tCode: ER | PA Method 3702 | 8015D: Gaso | | e RPDLimit | Qual |
| Client ID: LCSS Prep Date: 6/20/2017 | Batch Analysis D | n ID: 32: pate: 6/2 | S 396 21/2017 | F | tCode: EF RunNo: 4: SeqNo: 1: | PA Method 3702 376445 | 8015D: Gaso Units: mg/K | íg | | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Value above quantitation range E
- 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 5 of 6

1706B08

WO#: 23-Jun-17

Client: Blagg Engineering **Project:** MUDGE LS 6

| Sample ID MB-32396 | Samp | SampType: MBLK | | | TestCode: EPA Method 8021B: Volatiles | | | | | |
|----------------------------|------------|----------------|-----------|-------------|---------------------------------------|-----------|-------------|-------|----------|------|
| Client ID: PBS | Batc | h ID: 32 | 396 | F | RunNo: 4 | 3702 | | | | |
| Prep Date: 6/20/2017 | Analysis E | Date: 6 | 21/2017 | S | SeqNo: 1 | 376459 | Units: mg/h | (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-Bromofluorobenzene | 1.3 | | 1.000 | | 126 | 66.6 | 132 | | | |
| Sample ID LCS-32396 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: LCSS | Batch | n ID: 32 | 396 | F | RunNo: 4 | 3702 | | | | |
| Prep Date: 6/20/2017 | Analysis D | ate: 6/ | 21/2017 | S | SeqNo: 1 | 376460 | 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 | 105 | 80 | 120 | | | |
| Toluene | 1.1 | 0.050 | 1.000 | 0 | 107 | 80 | 120 | | | |
| Ethylbenzene | 1.1 | 0.050 | 1.000 | 0 | 108 | 80 | 120 | | | |
| Kylenes, Total | 3.3 | 0.10 | 3.000 | 0 | 109 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.3 | | 1.000 | | 129 | 66.6 | 132 | | | |
| | | | | | | | | | | |

Qualifiers:

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

Page 6 of 6

23-Jun-17

WO#: 1706B08

| ANAL | CONMENTAL YSIS RATORY | Hall Environmental Albu TEL: 505-345-3975 Website: www.ha | 4901 Hawkin querque, NM 8 FAX: 505-345- | 17109 Sam | ple Log-In Check Lis | t |
|--------------------|--|--|---|-------------------------------|---|------|
| Client Name: | BLAGG | Work Order Number: | 1706B08 | | RcptNo: 1 | |
| | | | | | | |
| Received By: | Anne Thome | 6/21/2017 7:45:00 AM | | Arre In- Arre In- | | |
| Completed By: | Anne Thome | 6/21/2017 8:06:04 AM | | anne An- | ~ | |
| Reviewed By: | ID | 6/21/17 | | | | |
| Chain of Cus | tody | | | | | |
| 1. Custody sea | Is intact on sample bottles? | | Yes | No 🗆 | Not Present 🗹 | |
| 2. Is Chain of C | ustody complete? | | Yes 🗹 | No 🗌 | Not Present | |
| 3. How was the | sample delivered? | | Courier | | | |
| Log In | | | | | | |
| 4. Was an atter | mpt made to cool the sampl | es? | Yes 🗹 | No 🗌 | NA 🗌 | |
| 5. Were all sam | ples received at a temperat | ture of >0° C to 6.0°C | Yes 🗹 | No 🗌 | | |
| 6. Sample(s) in | proper container(s)? | | Yes 🗹 | No 🗌 | | |
| 7. Sufficient sar | nple volume for indicated te | st(s)? | Yes 🗹 | No 🗆 | | |
| 8. Are samples | (except VOA and ONG) pro | perly preserved? | Yes 🗹 | No 🗌 | _ | |
| 9. Was preserva | ative added to bottles? | | Yes 🗌 | No 🗹 | NA 🗌 | |
| 10.VOA vials have | ve zero headspace? | | Yes | No 🗌 | No VOA Vials 🗹 | |
| 11. Were any sa | mple containers received br | oken? | Yes | No 🗹 | # of preserved | |
| | ork match bottle labels? | | Yes 🗹 | No 🗆 | for pH: | 1. D |
| | ancies on chain of custody) | | Yes 🗹 | No 🗔 | (<2 or >12 unless no Adjusted? | nea) |
| | correctly identified on Chain at analyses were requested? | | Yes 🗹 | No 🗌 | | - |
| 15. Were all hold | ing times able to be met? sustomer for authorization.) | | Yes 🗹 | No 🗌 | Checked by: | - |
| 0 | | | | | | |
| | ing (if applicable) | the this parts - 2 | Vec 🗖 | | | |
| | tified of all discrepancies wi | | Yes 🗌 | No 🗌 | NA 🗹 | |
| | Notified: | Date | | | | |
| By Who Regardi | | Via: | eMail F | Phone Fax | In Person | |
| - | ng. Istructions: | na a chairte ann an an an an an ann an an an an an a | | ning a Silato Marilda Materia | consecutive provident and the Consecutive Conse | |
| 17. Additional rer | р | | | | | |

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.3 | Good | Yes | | | |

Page 1 of 1

| С | hain- | of-Cu | istody Record | Turn-Around | Time: | SAME | | | | | | | | | | | | | | | |
|-------------------|---------------|-------------|--|---|----------------------|-----------------------------------|--------------|--|-----------------------------|--------------------|--------------------|-------------|---------------|---|------------------------------|-------------|-----------------|----------|-----------------|---------------|----------------------|
| Client: - | BP A | MERICA | | □ Standard | Rush | | | | | | | | | | | | | | | 'AL DR' | |
| Ŧ | ZINI (| Fala | and True | Project Name | | | | | | | | | | | | | | | | | |
| Mailing | Address | : Prome | erry Inc | Mussi | E LS 6 | | | | | | | .hall | | | | | | | | | |
| | | | | Project #: | | | | | | awki | | | | | | | | | | | |
| | 100 | -1 2-75 | 110.7 | | | | | Tel. 505-345-3975 Fax 505-345-4107 Analysis Request | | | | | | | | | | | | | |
| email or | - |) sa |)-1(93 | Project Mana | 201 | | | 5 | â | | | A | | | Req | uest | | | - | | |
| | Package: | | | 1 | - | | 21) | luo | MRG | | | | | SO | Sis | | | | | | |
| Stan | - | | Level 4 (Full Validation) | STEVE MOSEAL | | | 's (8021) | Gas | 10 | | | SIMS) | | 04 | B | | | | | | |
| Accredi | | | E zotor (i an tandatori) | Sampler: J- BLAKK | | | S,GIAL | H | DR | | | 0 SI | | 0 ₂ ,F | 082 | | | | • | | |
| | AP | D Othe | ۲ | OF IS A Yes END | | | | | 02 | 18.1 | 04.1 | 8270 | | 3°N | / 8(| | A | | | | N |
| | (Type) | | | Sample Tem | ana une sta | 3 | 1曲 | BE | (G | d 4 | od 5 | 0 or | etals | N,N | ides | F | 9 | W | | | Z |
| Date | Time | Matrix | Sample Request ID | Acoululin Container Type and # Mottkas | Preservative Type | HEAL NO. | BTEX + (WTBE | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 | RCRA 8 Metals | Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | CHURDE | | | Air Bubbles (Y or N) |
| 6/20/17 | 1407 | SOIL | T3P-24 | 40221 | COUL | 105- | X | | X | | | | | | | | | X | | T | |
| 11 | 1415 | м | T3P-25 | 11 | | 262 | X | | X | | | | | | | | | X | + | + | |
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| | | | | | | | | | | | | | | | | | | | | | |
| Date: | Time: | Rélinquist | H Blogg | Received by: | that, | bate Time | Re | mark | ks: B V | ib: | VE | ł(×c | NE | ver | -1 | | | | iosta | 1 | |
| Date: U/10/1-1 | Time: | Relinguist | that | Received by: | n A | Date Time , 0/0/2///7 0/145 | 7 | Teers | ii hech | BS : | Hz | | 201 | gM | -2 | . W | wb6i | εls | Q | | |
| tx lt , | If necessary, | samples sul | pritted to Hall Environmental may be sub | contracted to other a | ccredited laborator | tes. This serves as notice of th | is poss | ability. | Any s | | | - | will be | e clear | rly not | ated o | n the a | inalytic | al repo | irt. | |
| | | 4 | | | | | | | | | | | | | | | | | | | |
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:

Moskal, Steven

| From: | Moskal, Steven |
|--------------|--|
| Sent: | Wednesday, June 21, 2017 2:05 PM |
| To: | 'Smith, Cory, EMNRD'; 'l1thomas@blm.gov' |
| Cc: | Fields, Vanessa, EMNRD; jeffcblagg@aol.com; Hixon, Vance E; Gonzales, Jody J; dustindmace@gmail.com |
| Subject: | RE: Mudge LS 006 Sample Results - 6/21/17 |
| Attachments: | Mudge LS6.pdf |

All,

At laboratory results for the final treated stockpile sampling conducted yesterday are below the site closure standard and will be used as backfill.

BP requests a response to the variance request below. The construction crew is currently backfilling the areas of the excavation which have passed the site closure standards. The Z20 section of the excavation is awaiting a response to be backfilled.

Thank you,

Steve Moskal BP Lower 48 – San Juan Field Environmental Coordinator Office: (505) 326-9497 Cell: (505) 330-9179



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From: Moskal, Steven
Sent: Tuesday, June 20, 2017 2:02 PM
To: Smith, Cory, EMNRD; 'l1thomas@blm.gov'
Cc: Fields, Vanessa, EMNRD; jeffcblagg@aol.com; Hixon, Vance E; Gonzales, Jody J; dustindmace@gmail.com
Subject: Mudge LS 006 Sample Results - 6/20/17

Cory and Whitney,

Attached are the laboratory results from the excavation sampling conducted yesterday as well as an updated site diagram. All of the samples were below the site closure standard with the exception of Z20 with a TPH of 149 ppm TPH. BP request a variance to approve this sample for closure with no further action as the sample location is along a very tall and steep hillside which will make it very difficult to remove without significant disturbance to the native soil and vegetation as well as maintaining a safe excavation for construction personnel.

Please let me know if you approve.

Thank you,

Moskal, Steven

| From: | Moskal, Steven |
|----------|---|
| Sent: | Tuesday, June 13, 2017 8:53 AM |
| То: | Smith, Cory, EMNRD |
| Cc: | Fields, Vanessa, EMNRD; Whitney Thomas; Jeff Blagg; Hixon, Vance E; Gonzales, Jody J; |
| | dustindmace@gmail.com |
| Subject: | Re: Mudge LS-6 Sampling Results and Notification - 6/13/17 |

Cory,

The samples collected from the zones in question were 5-point composites consisting of 3 points collected from the visually impacted zone and 2 points collected from the visually, non-impacted zone.

Steve Moskal Environmental Coordinator -BP- SJS (505) 330-9179 Sent from my mobile device

> On Jun 13, 2017, at 8:07 AM, Smith, Cory, EMNRD <Cory.Smith@state.nm.us> wrote:

>

> Good morning Steve,

>

> Are the Z13/14 samples 5pt composite? If so are they all within the suspected zone of contamination? Or are they discrete grabs?

>

> Cory Smith

> Environmental Specialist

> Oil Conservation Division

> Energy, Minerals, & Natural Resources

> 1000 Rio Brazos, Aztec, NM 87410

> (505)334-6178 ext 115

> cory.smith@state.nm.us

>

> ----- Original Message-----

> From: Moskal, Steven [mailto:Steven.Moskal@bp.com]

> Sent: Tuesday, June 13, 2017 7:57 AM

> To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Fields, Vanessa,

> EMNRD <Vanessa.Fields@state.nm.us>; Whitney Thomas <l1thomas@blm.gov>

> Cc: Jeff Blagg <jeffcblagg@aol.com>; Hixon, Vance E

> <Vance.Hixon@bp.com>; Gonzales, Jody J <jody.gonzales@bp.com>;

> dustindmace@gmail.com

> Subject: Mudge LS-6 Sampling Results and Notification - 6/13/17

>

> All,

>

> Attached are the recently received lab results, an updated site map and treated stockpile tracking spreadsheet. The lab results indicate that the 500 yard treated stockpiles, TSP-21 &22, are below the site closure standard and will be used as backfill as needed.

>

> The excavation results are as follows:

>

> Z-11: South Wall - Non Detect

>> Whitney, Cory and Vanessa,

>>

>> BP requests to sample an minimum of 500 cubic yards of treated soils this afternoon around 2:00. Please let the group know if another time works best for you.

>>

>> Thank you,

>>

>> Steve Moskal

>> Environmental Coordinator -BP- SJS

>> (505) 330-9179

>> Sent from my mobile device

>>

>>> On Jun 6, 2017, at 7:56 AM, Moskal, Steven <Steven.Moskal@bp.com> wrote:

>>>

>>> All,

>>>

>>> Attached are the most recent lab results for Z9, the current eastern base of the excavation, and TSP-17, the third 500-yard stockpile sample; both samples are below the site closure standard and will be backfilled/used as backfill as the project progresses.

>>>

>>> The BLM has requested to adjust the sampling time of the excavation and available treated stockpiles to around 1:30 or 2:00 this afternoon. Please let the group know what the NMOCD is available. 2:00 is preferred by BP to allow for additional time to work the excavation.

>>>
>>> Thank you all,
>>>
Steve Moskal
>>> BP Lower 48 - San Juan - Farmington
>>> Field Environmental Coordinator
>>> Office: (505) 326-9497
>>> Cell: (505) 330-9179
>>> [cid:image001.jpg@01D2DE9A.738FA7D0]
>>>
This email and any attachments are intended of
proprietary, and/or privileged information. If you a

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>>>

>>>

>>>
>>>
>>>
>>>
>>> From: Moskal, Steven
>>> Sent: Monday, June 05, 2017 2:05 PM
>>> To: 'cory.smith@state.nm.us'; 'vanessa.fields@state.nm.us'; 'Whitney Thomas'
>>> Cc: 'Jeff Blagg'; Hixon, Vance E; Gonzales, Jody J; 'dustindmace@gmail.com'
>>> Subject: RE: Mudge LS-6 Sampling Request and Pipeline Issue
>>>
>>> There will be no sampling today. Progress of the excavation has been limited by the pipeline issue.

>>>

>>> We hope to sample tomorrow afternoon around the same time.

>>>

>>> Thank you,

>>>

>>> Steve Moskal

>>> To: cory.smith@state.nm.us<mailto:cory.smith@state.nm.us>;>>> vanessa.fields@state.nm.us<mailto:vanessa.fields@state.nm.us>;>>> Whitney Thomas

>>> Cc: Jeff Blagg; Hixon, Vance E; Gonzales, Jody J;

>>> dustindmace@gmail.com<mailto:dustindmace@gmail.com>

>>> Subject: Mudge LS-6 sample results and sample variance request

>>> All,

>>>

>>> Attached is the recent sample results from the excavation and >>> stockpile sampling preformed yesterday. The excavation sidewall >>> sample exceeds the site closure standard with 120 ppm TPH. However, >>> the closely located MW-4D and 4S indicate no contamination. MW-2 >>> was installed in imported backfill after the completion of the 2015 >>> excavation. BP request for a variance in accepting the 120 ppm for >>> closure as there is a small amount, approximately 10 cubic yards, of >>> impacted soil that will remain if approved. The monitoring wells >>> are in close proximity of the Z8 sample and provide lateral >>> delineation of the impacts in the northern direction. Please let me >>> know if the request for variance is approved

>>>

>>> TSP-16, a 500 cubic yard sample, resulted in 13 ppm TPH and will be used as backfill as needed.

>>>

>>> The grab sample was collected to obtain further information regarding the contamination levels of the dark grey soil located near the base of the excavation.

>>>

>>> As a reminder, we plan to sample tomorrow afternoon around 1:00 PM, followed by sampling at the Mudge A 002 around 2:00 PM.

>>> Thank you,
>>> Steve Moskal
>>> BP Lower 48 - San Juan - Farmington
>>> Field Environmental Coordinator
>>> Office: (505) 326-9497
>>> Cell: (505) 330-9179
>>> [cid:image006.jpg@01D2DE9A.735B5160]

>>>

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