

April 15, 2019

Reference No. 088210-35

Mr. Mike Bratcher New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department 811 South First Street Artesia, New Mexico 88240

Ms. Kari Vasenden Bureau of Land Management 620 E Greene Street Carlsbad, New Mexico 88220

Dear Mr. Bratcher and Ms. Vasenden

Re: Closure Request Livingston Ridge #2 SWD Water Line 2RP-2044 EOG Resources, Inc. Site Location: Sec. 1, T 22-S, R 31-E (Lat 32.41751°, Long -103.73427°) Eddy County, New Mexico

GHD Services Inc. (GHD), on behalf of EOG Resources (EOG) is requesting that no further action (NFA) status be granted for the Livingston Ridge SWD water line release (hereafter referred to as the "Site"). The Site is located within Section 1, Township 22 South, Range 31 East, in Eddy County, New Mexico (**Figure 1**).

In an Assessment Summary Report dated October 16, 2017 (**Attachment 1**) GHD recommended the following scope items be completed following delineation of the soil impacts in order to achieve NFA:

- Excavate the spill area to a depth of 4 feet below ground surface (ft bgs) and stockpile the soil to be used for future backfill at the Site. Collect soil samples and submit for chloride analysis to determine if the excavated soil can be used as backfill. See **Table 1** and **Attachment 2** laboratory reports for stockpile and confirmation sample results.
- Place a 20-mil polyethylene liner in the bottom of the excavation (see **Figure 2** for the excavation area) at a depth of 4 ft bgs.
- Backfill the excavation with clean fill material and wheel compact to grade.
- Fertilize and reseed the disturbed area with a BLM-approved seed mix.

The work scope was approved by Mr. Mike Bratcher with the New Mexico Oil Conservation Division on November 28, 2017. Ms. Shelly Tucker with the Bureau of Land Management approved the work scope on January 19, 2018 (Attachment 3). As of the date of this letter, the approved scope of work outlined above was completed and is documented in the attached completion photos (Attachment 4) and final C-141 (Attachment 5) for the Site; therefore, NFA is being requested.





Your timely response to this request is greatly appreciated. Should you have any questions, or require additional information regarding this submittal, please feel free to contact our Midland office at (432) 686-0086.

Sincerely,

GHD

Note fine

Nate Reece Environmental Scientist

JW/mk/01

Murrey

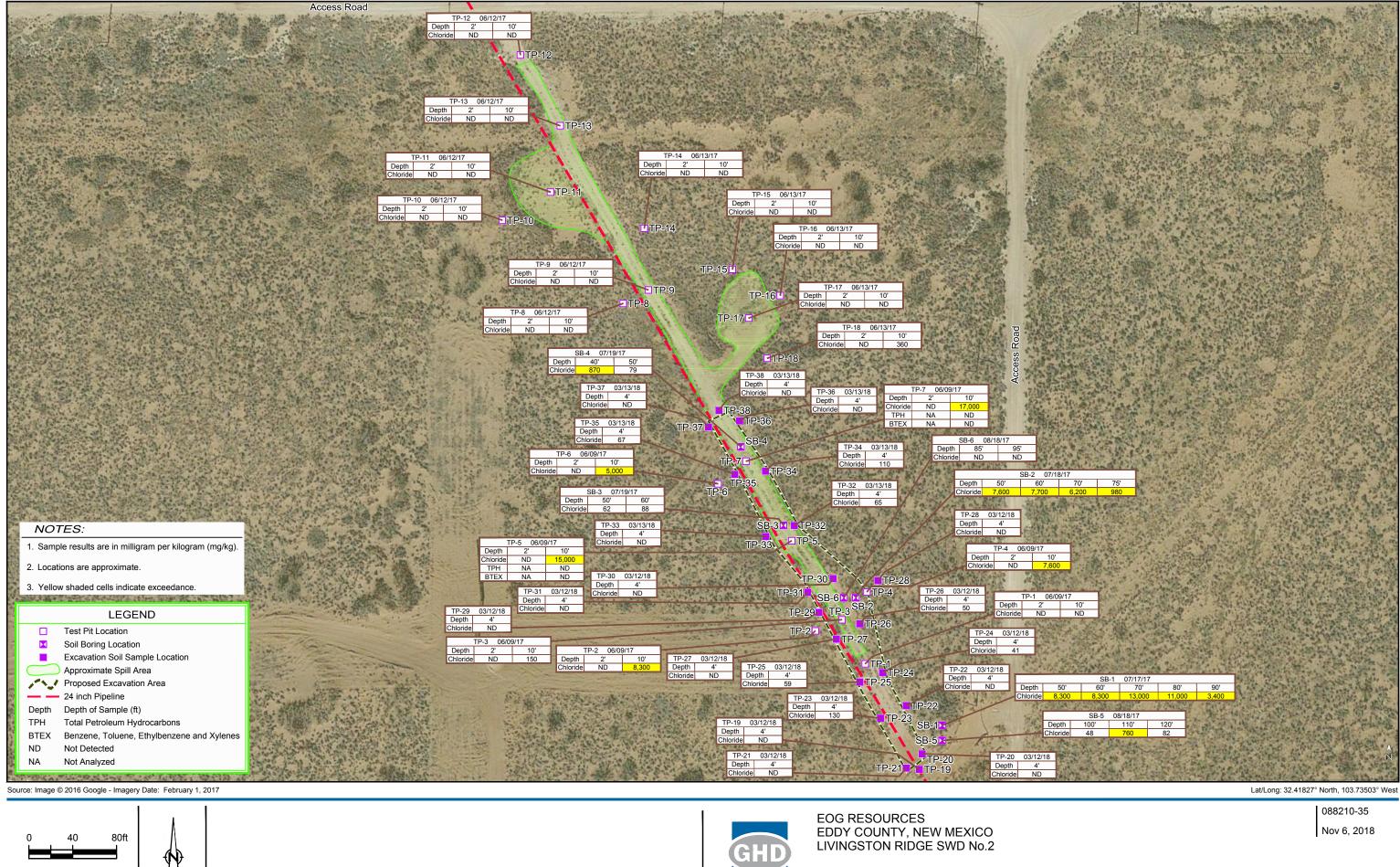
J.T. Murrey Senior Project Manager

Encl. Figure 1 – Site Location Map Figure 2 – Sample Location Map Table 1 – Summary of Soil Analytical Data Attachment 1 – Assessment Summary Report Attachment 2 – Laboratory Reports Attachment 3 – Work Plan Approvals Attachment 4 – Photo Log Attachment 5 – Final C-141

# **Figures**

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SAMPLE LOCATION MAP

CAD File: htcADJFiles/08\_\_1088\_10-EOG-Madera Bidge 25-11088210-35(000)GN-DL001.dwg Released to Imaging: 7/7/2023 11:38:29 AM

Coordinate System: NAD 1983 (2011) StatePlane-New Mexico East (US Feet)



## Tables

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# Table 1Summary of Soil Analytical DataLivingston Ridge SWD #2 Water Line

|                                | Depth  |           |         |         |              |         |        | TPH   | TPH   | TPH   | Total |          |
|--------------------------------|--------|-----------|---------|---------|--------------|---------|--------|-------|-------|-------|-------|----------|
| Sample ID                      | (feet) | Date      | Benzene | Toluene | Ethylbenzene | Xylenes | BTEX   | (GRO) | (DRO) | (MRO) | TPH   | Chloride |
| Assessment Soil Sample Results |        |           |         |         |              |         |        |       |       |       |       |          |
| 088210-35-060917-MG-TP-1-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-1-10    | 10     | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-060917-MG-TP-2-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-2-10    | 10     | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 8300     |
| 088210-35-060917-MG-TP-3-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-3-10    | 10     | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 150      |
| 088210-35-060917-MG-TP-4-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-4-10    | 10     | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 7600     |
| 088210-35-060917-MG-TP-5-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-5-10    | 10     | 6/9/2017  | <0.024  | <0.048  | <0.048       | <0.097  | <0.217 | <4.8  | <9.6  | <48   | <62.4 | 15000    |
| 088210-35-060917-MG-TP-6-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-6-10    | 10     | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 5000     |
| 088210-35-060917-MG-TP-7-2     | 2      | 6/9/2017  | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-7-10    | 10     | 6/9/2017  | <0.024  | <0.049  | <0.049       | <0.097  | <0.219 | <4.9  | <10   | <50   | <64.9 | 17000    |
| 088210-35-061217-MG-TP-8-2     | 2      | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-8-10    | 10     | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-9-2     | 2      | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-9-10    | 10     | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-10-2    | 2      | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-10-10   | 10     | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-11-2    | 2      | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-11-10   | 10     | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-12-2    | 2      | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-12-10   | 10     | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-13-2    | 2      | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-13-10   | 10     | 6/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-14-2    | 2      | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-14-10   | 10     | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-15-2    | 2      | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-15-10   | 10     | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-16-2    | 2      | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-16-10   | 10     | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-17-2    | 2      | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-17-10   | 10     | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-18-2    | 2      | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-18-10   | 10     | 6/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 360      |

GHD 088210-35BratcherVasenden1-Table 1

# Table 1Summary of Soil Analytical DataLivingston Ridge SWD #2 Water Line

|                              | Depth  |           |         |           |               |         |      | TPH   | TPH   | TPH   | Total |          |
|------------------------------|--------|-----------|---------|-----------|---------------|---------|------|-------|-------|-------|-------|----------|
| Sample ID                    | (feet) | Date      | Benzene | Toluene   | Ethylbenzene  | Xylenes | BTEX | (GRO) | (DRO) | (MRO) | TPH   | Chloride |
|                              |        |           | Soil E  | Boring La | boratory Resu | ults    | •    | :     |       |       | •     |          |
| 088210-35-071717-MG-SB-1-50  | 50     | 7/17/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 8300     |
| 088210-35-071717-MG-SB-1-60  | 60     | 7/17/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 8300     |
| 088210-35-071717-MG-SB-1-70  | 70     | 7/17/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 13000    |
| 088210-35-071817-MG-SB-1-80  | 80     | 7/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 11000    |
| 088210-35-071817-MG-SB-1-90  | 90     | 7/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 3400     |
| 088210-35-071817-MG-SB-2-50  | 50     | 7/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 7600     |
| 088210-35-071817-MG-SB-2-60  | 60     | 7/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 7700     |
| 088210-35-071817-MG-SB-2-70  | 70     | 7/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 6200     |
| 088210-35-071817-MG-SB-2-75  | 75     | 7/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 980      |
| 088210-35-071817-MG-SB-3-50  | 50     | 7/19/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 62       |
| 088210-35-071817-MG-SB-3-60  | 60     | 7/19/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 88       |
| 088210-35-071817-MG-SB-4-40  | 40     | 7/19/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 870      |
| 088210-35-071817-MG-SB-4-50  | 50     | 7/19/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 79       |
| 088210-35-081817-SP-SB-5-100 | 100    | 8/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 48       |
| 088210-35-081817-SP-SB-5-110 | 110    | 8/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 760      |
| 088210-35-081817-SP-SB-5-120 | 120    | 8/18/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 82       |
| 088210-35-081617-SP-SB-6-85  | 85     | 8/16/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-081617-SP-SB-6-95  | 95     | 8/16/2017 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
|                              |        |           | Excav   | ation Soi | I Sample Res  | ults    |      |       |       |       |       |          |
| 088210-35-031218-MG-TP-19    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-20    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-21    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-22    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-23    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 130      |
| 088210-35-031218-MG-TP-24    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 41       |
| 088210-35-031218-MG-TP-25    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 59       |
| 088210-35-031218-MG-TP-26    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 50       |
| 088210-35-031218-MG-TP-27    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-28    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-29    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-30    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031218-MG-TP-31    | 4      | 3/12/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031318-MG-TP-32    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 65       |
| 088210-35-031318-MG-TP-33    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031318-MG-TP-34    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 110      |
| 088210-35-031318-MG-TP-35    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | 67       |
| 088210-35-031318-MG-TP-36    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031318-MG-TP-37    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |
| 088210-35-031318-MG-TP-38    | 4      | 3/13/2018 | NA      | NA        | NA            | NA      | NA   | NA    | NA    | NA    | NA    | <30      |

GHD 088210-35BratcherVasenden1-Table 1

# Table 1Summary of Soil Analytical DataLivingston Ridge SWD #2 Water Line

|                          | Depth     |           |         |            |              |         |      | TPH   | TPH      | TPH      | Total |          |
|--------------------------|-----------|-----------|---------|------------|--------------|---------|------|-------|----------|----------|-------|----------|
| Sample ID                | (feet)    | Date      | Benzene | Toluene    | Ethylbenzene | Xylenes | BTEX | (GRO) | (DRO)    | (MRO)    | TPH   | Chloride |
|                          |           |           | Stoc    | kpile Soil | Sample Resu  | lts     |      |       |          |          |       |          |
| 088210-35-031318-MG-SP-1 |           | 3/13/2018 | NA      | NA         | NA           | NA      | NA   | NA    | NA       | NA       | NA    | 250      |
| 088210-35-031318-MG-SP-2 |           | 3/13/2018 | NA      | NA         | NA           | NA      | NA   | NA    | NA       | NA       | NA    | 220      |
| 088210-35-031318-MG-SP-2 |           | 3/13/2018 | NA      | NA         | NA           | NA      | NA   | NA    | NA       | NA       | NA    | 45       |
| 088210-35-031318-MG-SP-4 |           | 3/13/2018 | NA      | NA         | NA           | NA      | NA   | NA    | NA       | NA       | NA    | 140      |
| NMOCD RRALs (Total Rank  | ing Score | e = 0)    | 10      |            | 50           |         |      |       | Total TP | H: 5,000 |       | 600      |

Notes:

All sample results are in milligrams per kilogram NA = Not Analyzed NMOCD = New Mexico Oil Conservation Division SP = Stockpile Sample RRALs = Recommended Remediation Action Limits Highlighted = Exceeds NMOCD RRAL

GHD 088210-35BratcherVasenden1-Table 1

## **Attachments**

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# Attachment 1 Assessment Summary Report



October 16, 2017

Reference No. 088210-35

Mr. Zane Kurtz Sr. Safety and Environmental Representative 5509 Champions Dr. Midland, TX 79706 VIA E-Mail: zane\_kurtz@eogresources.com

Dear Mr. Kurtz:

Re: Assessment Summary Report Livingston Ridge SWD Water Line 2RP-2044 EOG Resources, Inc. Site Location: Sec. 1, T 22-S, R 31-E (Lat 32.41751°, Long -103.73427°) Eddy County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this report for the above referenced site. Assessment activities were performed at the Livingston Ridge SWD Water Line (hereafter referred to as the "Site"), from June 9 to August 18, 2017 by GHD. The Site is located within Section 1, Township 22 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The property is owned by the U.S. Bureau of Land Management (BLM).

The Site is an active pipeline located approximately 30 miles east-northeast of Carlsbad, New Mexico. According to EOG Resources, Inc. (EOG) supplied Site information, a release of approximately 50 barrels (bbls) of crude oil and 3,200 bbls of produced water occurred when a flowline ruptured. Approximately 30 bbls of crude oil and 480 bbls of produced water were recovered after the release utilizing vacuum trucks. The release was discovered on October 27, 2013. A C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) and the BLM on November 5, 2013 and remediation permit (RP) number 2RP-2044 was assigned.

Initial delineation samples were collected on November 4, 2013 in five areas within the release area (green outlined area on Figure 2) by Yates Petroleum Corporation (Yates). Thirty-nine samples were collected from depths ranging from 2 to 16 feet below ground surface (ft. bgs) and submitted for laboratory analyses. The samples were submitted to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, total petroleum hydrocarbons (TPH) gasoline and diesel range organics by EPA Method 8015M, and chlorides by Method SM4500CL-B analysis.

None of the samples contained BTEX or TPH constituents above the laboratory reporting limits. Chloride concentrations ranged from 6,280 to 29,600 milligrams per kilogram (mg/kg).



Additional vertical delineation samples were collected on January 16, 2014 by Yates utilizing a core drill rig. Twenty-four samples were collected from depths ranging from 20 to 55 ft. bgs within three areas of the release area. The samples were submitted to Cardinal for chloride analysis by Method SM4500CL-B. Chloride concentrations ranged from 128 to 14,800 mg/kg. A sample collected from one boring centrally located in the release area contained a chloride concentration of 752 mg/kg at a depth 55 ft. bgs. This sample represented the deepest chloride concentration greater than the NMOCD Recommended Remedial Action Level (RRAL) of 600 mg/kg established for this Site (see below).

### 1. Recommended Remediation Action Limits

There are relatively few groundwater wells in the area of the Site with which to obtain a depth to groundwater. Based on information available from the New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System website, the closest well with a reported depth to water is approximately 3.5 miles from the site. The depth to groundwater measured in this well was 448 feet below ground surface (ft. bgs).

Based on information available from the United States Geological Survey (USGS) website, the closest USGS gauging site, approximately 2.7 miles southeast of the site, indicates groundwater at a depth of approximately 125 feet below ground surface (ft. bgs) in 1988. The well information is included in Appendix A.

Groundwater was not encountered in soil boring SB-5 that was advanced to a depth of 130 ft. bgs during GHD's assessment activities.

There do not appear to be any wellhead protection areas and no surface water bodies within 200 ft. to 1000 ft. of the Site. Therefore, the preliminary total ranking score for the Site is 0 (see table below).

Based on this score, the applicable NMOCD Site-specific RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 5,000 mg/kg for total TPH, and 600 mg/kg for chlorides.

In an August 28, 2017 telephone conversation between Bernard Bockisch of GHD and Jim Griswold, NMOCD Environmental Bureau Chief, GHD was informed that the NMOCD is accepting chloride concentrations of 600 mg/kg for assessment clean up levels.

| New Mexico Oil Conservation Division Site Assessment                                    |       |
|---|-------|
| Ranking Criteria  | Score |
| Depth to Ground Water (> 100 ft. bgs)   | 0     |
| Wellhead Protection Area (> 1000 ft. from water source, > 200 ft. from domestic source) | 0     |
| Distance to Surface Body Water (200-1000 ft.)   | 0     |
| Ranking Criteria Total Score  | 0*    |



New Mexico Oil Conservation Division Site Assessment

\*Because the ranking criteria total score is 0, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 5,000 mg/kg for TPH<sup>1</sup>, and 600 mg/kg for chlorides.

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993.

#### 2. Assessment Activities

GHD and SDR Enterprises, LLC (SDR) performed additional delineation from June 9 to August 18, 2017 that included the collection of 36 soil samples from 18 test pits and 18 samples from 6 soil borings. Soil samples were collected from 2 ft. bgs and 10 ft. bgs in each test pit and submitted to Hall Environmental Analysis Laboratory (HEAL) located in Albuquerque, New Mexico. Two samples (TP-5 and TP-7) were submitted for TPH (gasoline, diesel, and motor oil range) by EPA Method 8015 BTEX by EPA Method 8021B. All of the samples were submitted for chloride analysis by EPA 300.

BTEX and TPH constituents were not detected above the laboratory reporting limits and chlorides ranged from below the laboratory reporting limit to 17,000 mg/kg. Chloride was detected above the NMOCD RRAL in five of the test pit samples (TP-2, TP-4, TP-5, TP-6, and TP-7) all at depths of 10 ft. bgs. These test pits were located in the southern area of the release. The analytical data is summarized on Table 1 and the laboratory reports are included in Appendix A.

The horizontal and vertical extent of the chloride concentrations within the northern portion of the spill area had been delineated to below the RRAL for chloride. However, the horizontal and vertical extent of chloride concentrations in the southern portion of the impacted area was not fully assessed.

Further soil sampling and soil boring activities were performed by GHD and Enviro-Drill, Inc. of Albuquerque, New Mexico from July 17 through 19, 2017 to assess the vertical extent of chloride concentrations in the soil in the southern portion of the impacted area. Thirteen additional soil samples were collected from four soil borings (SB-1 to SB-4) at depths ranging from 40 ft. bgs to 90 ft. bgs. The samples were submitted to HEAL for analysis of chloride by EPA Method 300.0.

| Soil Boring ID | Depth | Chloride Concentration in mg/kg |
|----------------|-------|---------------------------------|
| SB-1           | 50    | 8,300                           |
| SB-1           | 60    | 8,300                           |
| SB-1           | 70    | 13,000                          |
| SB-1           | 80    | 11,000                          |
| SB-1           | 90    | 3,400                           |

Chloride concentrations in these samples ranged from 62 to 13,000 mg/kg. A summary of the soil boring laboratory results is presented in the following table.



| Soil Boring ID   | Depth | Chloride Concentration in mg/kg |
|------------------|-------|---------------------------------|
| SB-2             | 50    | 7,600                           |
| SB-2             | 60    | 7,700                           |
| SB-2             | 70    | 6,200                           |
| SB-2             | 75    | 980                             |
| SB-3             | 50    | 62                              |
| SB-3             | 60    | 88                              |
| SB-4             | 40    | 870                             |
| SB-4             | 50    | 79                              |
| SB-5 (near SB-1) | 100   | 48                              |
| SB-5 (near SB-1) | 110   | 760                             |
| SB-5 (near SB-1) | 120   | 82                              |
| SB-6 (near SB-2) | 85    | <30                             |
| SB-6 (near SB-2) | 95    | <30                             |

The analytical data is summarized on Table 1 and the laboratory reports are included in Appendix A.

Two additional soil borings, SB-5 and SB-6 were advanced in close proximity to SB-1 and SB-2, respectively between August 16 and 18, 2017. Borings SB-1 and SB-2 experienced drilling refusal at depths of 90 and 75 ft. bgs. The two additional soil borings (SB-5 and SB-6) were advanced to collect additional samples from below these depths.

Three soil samples were collected from SB-5 (near SB-1) from 100, 110, and 120 ft. bgs and two samples were collected from SB-6 (near SB-2) at depths of 85 and 95 ft. bgs. The samples were submitted to HEAL for analysis of chloride by EPA Method 300.0.

Soils at the Site consisted primarily of clayey sands and silty sands with the sands being either very fine or fine grained. A clay with sand unit was encountered at varying depths in all of the soil borings. The soil boring logs are included as Appendix C.

Based on the collected assessment data, it appears that the vertical and horizontal extent of chlorideimpacted soil has been fully assessed as shown on Figure 2.

### 3. Summary and Recommendations

Based on the assessment of the chloride concentrations, GHD recommends the following:

- Excavating the spill area to a depth of 4 ft. bgs and stockpiling the soil to be used for future backfill at the Site. Soil samples will be collected and submitted for chloride analysis to determine if the excavated soil can be used as backfill.
- Placement of a 20-mil polyethylene liner in the bottom of the excavation (see Figure 2 for the excavation area) at a depth of 4 ft. bgs.



- Backfilling of the excavation with clean fill material and wheel compacting to grade.
- Fertilizing and reseeding of the disturbed area with a BLM-approved seed mix.

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

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

Sincerely,

GHD

AIC Brand

Alan Brandon Senior Project Manager

BB/mc/30

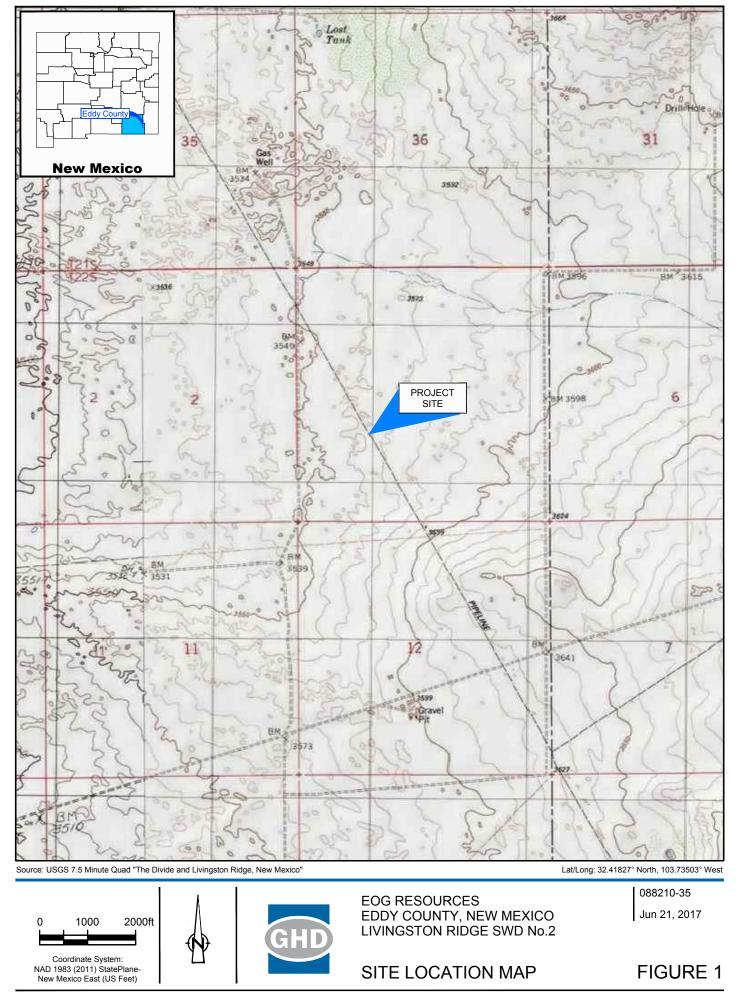
Bernard Bockisch Albuquerque Operations Manager

# **Figures**

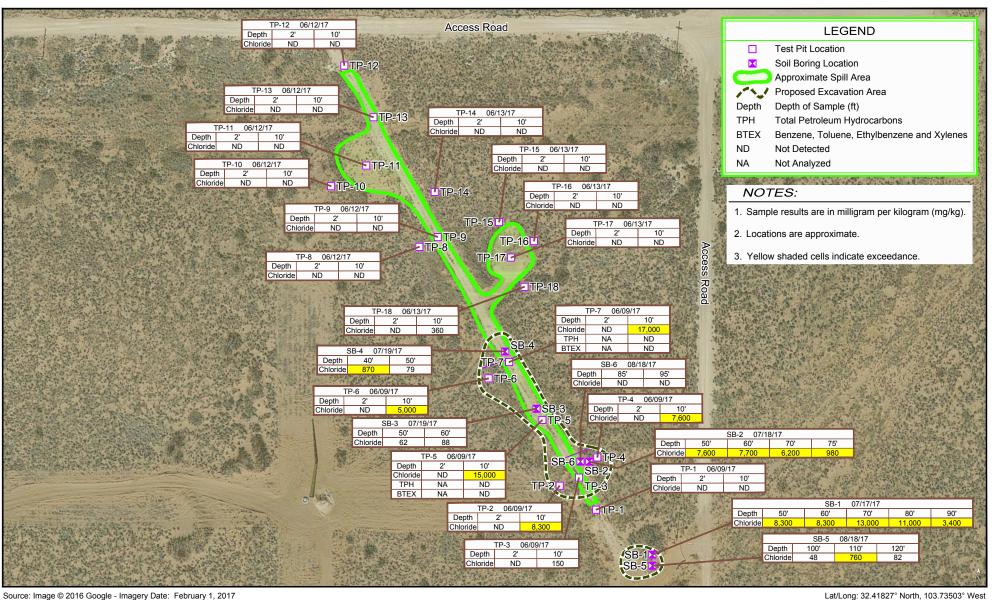
•

Laboratory Analytical Report

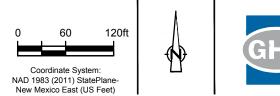
**Released to Imaging:** 7/7/2023 11:38:29 AM



CAD File: 1\CAD\Files\08\_\088210-EOG-Madera Bidge 25-1\088210-35(000)GN-DL001.dwg Released to Imaging: 7/7/2023 11:38:29 AM



Source: Image © 2016 Google - Imagery Date: February 1, 2017



EOG RESOURCES EDDY COUNTY, NEW MEXICO LIVINGSTON RIDGE SWD No.2

### SAMPLE LOCATION MAP

088210-35

Oct 11, 2017

FIGURE 2

CAD File: 1/CADIFiles108-088-088210-EOG-Madera Ridge 25-1088210-35(000)GN-DL001.dwg Released to Imaging: 7/7/2023 11:38:29 AM

## Tables

•

Laboratory Analytical Report

**Released to Imaging:** 7/7/2023 11:38:29 AM

Table 1

Livingston Ridge SWD #2 Water Line - Summary of Soil Analytical Data

|                              | Depth  |            |         |         |              |         |        | TPH   | TPH   | TPH   | Total | Τ        |
|------------------------------|--------|------------|---------|---------|--------------|---------|--------|-------|-------|-------|-------|----------|
| Sample ID                    | (feet) | Date       | Benzene | Toluene | Ethylbenzene | Xylenes | BTEX   | (GRO) | (DRO) | (MRO) | TPH   | Chloride |
| 088210-35-060917-MG-TP-1-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-1-10  | 10     | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-060917-MG-TP-2-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-2-10  | 10     | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 8300     |
| 088210-35-060917-MG-TP-3-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-3-10  | 10     | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 150      |
| 088210-35-060917-MG-TP-4-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-4-10  | 10     | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 7600     |
| 088210-35-060917-MG-TP-5-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-5-10  | 10     | 06/09/2017 | <0.024  | <0.048  | <0.048       | <0.097  | <0.217 | <4.8  | <9.6  | <48   | <62.4 | 15000    |
| 088210-35-060917-MG-TP-6-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-6-10  | 10     | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 5000     |
| 088210-35-060917-MG-TP-7-2   | 2      | 06/09/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-060917-MG-TP-7-10  | 10     | 06/09/2017 | <0.024  | <0.049  | <0.049       | <0.097  | <0.219 | <4.9  | <10   | <50   | <64.9 | 17000    |
| 088210-35-061217-MG-TP-8-2   | 2      | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-8-10  | 10     | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-9-2   | 2      | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-9-10  | 10     | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-10-2  | 2      | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-10-10 | 10     | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-11-2  | 2      | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-11-10 | 10     | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-12-2  | 2      | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-12-10 | 10     | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061217-MG-TP-13-2  | 2      | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061217-MG-TP-13-10 | 10     | 06/12/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-14-2  | 2      | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-14-10 | 10     | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-15-2  | 2      | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-15-10 | 10     | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-16-2  | 2      | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-16-10 | 10     | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-17-2  | 2      | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-17-10 | 10     | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-35-061317-MG-TP-18-2  | 2      | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | <30      |
| 088210-33-061317-MG-TP-18-10 | 10     | 06/13/2017 | NA      | NA      | NA           | NA      | NA     | NA    | NA    | NA    | NA    | 360      |
|                              |        |            |         |         |              |         |        |       |       |       |       |          |

GHD 088210-35

Table 1

#### Livingston Ridge SWD #2 Water Line - Summary of Soil Analytical Data

| Sample ID                    | Depth<br>(feet) | Date       | Benzene | Toluene | Ethylbenzene | Xylenes | втех | TPH<br>(GRO)     | TPH<br>(DRO) | TPH<br>(MRO) | Total<br>TPH | Chloride |
|------------------------------|-----------------|------------|---------|---------|--------------|---------|------|------------------|--------------|--------------|--------------|----------|
|                              | · · /           |            |         |         | ,            | ,       |      | 、 <i>,</i>       | · · /        | · · /        |              |          |
| 088210-35-071717-MG-SB-1-50  | 50              | 07/17/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 8300     |
| 088210-35-071717-MG-SB-1-60  | 60              | 07/17/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 8300     |
| 088210-35-071717-MG-SB-1-70  | 70              | 07/17/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 13000    |
| 088210-35-071817-MG-SB-1-80  | 80              | 07/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 11000    |
| 088210-35-071817-MG-SB-1-90  | 90              | 07/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 3400     |
| 088210-35-071817-MG-SB-2-50  | 50              | 07/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 7600     |
| 088210-35-071817-MG-SB-2-60  | 60              | 07/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 7700     |
| 088210-35-071817-MG-SB-2-70  | 70              | 07/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 6200     |
| 088210-35-071817-MG-SB-2-75  | 75              | 07/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 980      |
| 088210-35-071817-MG-SB-3-50  | 50              | 07/19/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 62       |
| 088210-35-071817-MG-SB-3-60  | 60              | 07/19/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 88       |
| 088210-35-071817-MG-SB-4-40  | 40              | 07/19/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 870      |
| 088210-35-071817-MG-SB-4-50  | 50              | 07/19/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 79       |
| 088210-35-081817-SP-SB-5-100 | 100             | 08/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 48       |
| 088210-35-081817-SP-SB-5-110 | 110             | 08/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 760      |
| 088210-35-081817-SP-SB-5-120 | 120             | 08/18/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | 82       |
| 088210-35-081617-SP-SB-6-85  | 85              | 08/16/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | <30      |
| 088210-35-081617-SP-SB-6-95  | 95              | 08/16/2017 | NA      | NA      | NA           | NA      | NA   | NA               | NA           | NA           | NA           | <30      |
|                              |                 |            |         |         |              |         |      |                  |              |              |              | <u> </u> |
| NMOCD RRALs (Total Ra        | Inking Score    | = 0)       | 10      |         | 50           |         |      | Total TPH: 5,000 |              |              |              | 600      |

Notes:

All sample results are in milligrams per kilogram NA = Not Analyzed NMOCD = New Mexico Oil Conservation Division RRALs = Recommended Remediation Action Limits Highlighted = Exceeds NMOCD RRAL

# Appendices

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Laboratory Analytical Report

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# Appendix A Water Well Report

Laboratory Analytical Report

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Livingston Ridge Swo #2



Page 25 of 136

### New Mexico Office of the State Engineer Water Column/Average Depth to Water

| (A CLW##### in the<br>POD suffix indicates<br>the POD has been<br>replaced & no longer<br>serves a water right | (R=POD has<br>been replaced,<br>O=orphaned,<br>C=the file is |    |     |      |    |        |           | IE 3=SW 4 | 4=SE)         |              |             |          |      |
|--|--|----|-----|------|----|--------|-----------|-----------|---------------|--------------|-------------|----------|------|
| file.)   | closed)  |    |     | rges |    | re sma | allest to |           | AD83 UTM in n | neters)      | (In i       | eet)     |      |
|  | POD  |    |     |      |    |        |           |           |               |              |             |          |      |
| POD Number   | Sub-<br>Code basin Co  |    |     | Q Q  |    | Tws    | Bna       | х         | Y             | DistanceD    | epthWellDep |          | ater |
| <u>C 02744</u>   |  | ED |     |      |    | 225    | •         | 617374    |               | 1839         | 4911        |          | ann  |
| <u>C 02745</u>   |  | ED | 4 : | 2 2  | 15 | 22S    | 31E       | 616789    | 3585013* 🌍    | 3300         | 925         |          |      |
| <u>C 02746</u>   |  | ED | 4 2 | 22   | 15 | 22S    | 31E       | 616789    | 3585013* 🌍    | 3300         | 930         |          |      |
| <u>C 02747</u>   |  | ED | 4 2 | 2 2  | 15 | 22S    | 31E       | 616789    | 3585013* 🈜    | 3300         | 1076        |          |      |
| C 02949 EXPL   |  | ED | 1   | 14   | 34 | 21S    | 31E       | 616140    | 3589231* 🌍    | 3397         | 970         |          |      |
| <u>C 03150</u>   |  | ED | 2 4 | 44   | 14 | 22S    | 31E       | 618412    | 3584025* 🌍    | 3469         | 981         |          |      |
| <u>C 02939</u>   | С  | LE | 3 3 | 31   | 19 | 22S    | 32E       | 620234    | 3583042* 🌍    | 4560         | 280         |          |      |
| C 03717 POD1   | С  | LE | 4 4 | 41   | 09 | 22S    | 32E       | 624094    | 3586365 🌍     | 5179         | 650         |          |      |
| C 03112 EXPLORE  |  | ED | 3 - | 1 1  | 09 | 22S    | 31E       | 613753    | 3586590* 🌍    | 5341         | 3567        |          |      |
| <u>C 02415</u>   |  | ED | 3 3 | 34   | 16 | 22S    | 31E       | 614592    | 3583785* 🌍    | 5746         | 880         | 448      | 432  |
| <u>C 02727</u>   |  | ED | 3 1 | 1 1  | 33 | 21S    | 31E       | 613716    | 3589809* 鍨    | 5815         | 913         |          |      |
| <u>C 02682</u>   |  | ED | 4 4 | 14   | 08 | 22S    | 31E       | 613566    | 3585379* 🌍    | 5836         | 4400        |          |      |
|  |  |    |     |      |    |        |           |           | Avera         | age Depth to | Water:      | 448 feet |      |
|  |  |    |     |      |    |        |           |           |               | Minimum D    | epth:       | 448 feet |      |
|  |  |    |     |      |    |        |           |           |               | Maximum D    | epth:       | 448 feet |      |
| Record Count:12  |  |    |     |      |    |        |           |           |               |              |             |          |      |
|  |  |    |     |      |    |        |           |           |               |              |             |          |      |

UTMNAD83 Radius Search (in meters):

Easting (X): 619026.33 Northing (Y): 3587439.34

\*UTM location was derived from PLSS - see Help

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

Radius: 6000

8/24/17 8:17 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

GO



USGS Home Contact USGS Search USGS

V

### National Water Information System: Web Interface

USGS Water Resources

 Data Category:
 Geographic Area:

 Groundwater
 V

Click to hideNews Bulletins

- Please see news on new formats
- Full News

Groundwater levels for the Nation

### Search Results -- 1 sites found

site\_no list =

### • 322333103461401

GO

V

### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

### USGS 322333103461401 22S.31E.15.13214

Available data for this site Groundwater: Field measurements

Eddy County, New Mexico Hydrologic Unit Code --

Latitude 32°23'40", Longitude 103°46'16" NAD27

Land-surface elevation 3,455 feet above NAVD88

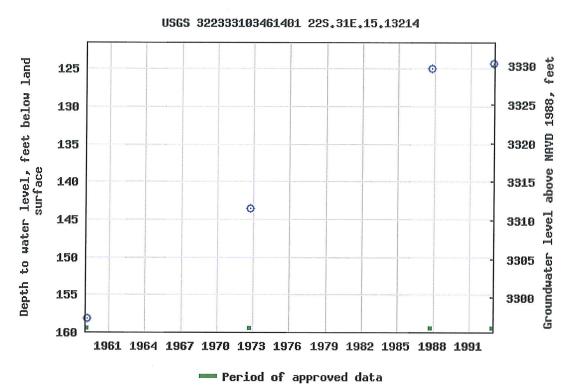
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

**Output formats** 

| <u>Table of data</u> |  |  |
|----------------------|--|--|
| Tab-separated data   |  |  |
|                      |  |  |

<u>Graph of data</u>

Reselect period



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

Download a presentation-quality graph

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

AccessibilityPlug-InsFOIAPrivacyPolicies and NoticesU.S. Department of the InteriorU.S. Geological SurveyTitle:Groundwater for USA:Water LevelsURL:https://nwis.waterdata.usgs.gov/nwis/gwlevels?Page Contact Information:USGS Water Data Support Team

Page Contact Information: <u>USGS Water Data Support Tea</u> Page Last Modified: 2017-10-04 09:30:06 EDT 0.97 0.88 nadww02 Released to Imaging: 7/7/2023 11:38:29 AM

USA.gov

# Appendix B Laboratory Analytical Reports

Laboratory Analytical Report

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June 19, 2017 Bernie Bockish GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

Hall Environmental Analysis Laboratory

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

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

RE: Livingston 2

OrderNo.: 1706844

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 36 sample(s) on 6/15/2017 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

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 017      |
|------------------------------|-------------|------------|-------------|---|----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-060917-MG                                      | -TP-1-2' |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/9/2017 9:55:00 AM                                       |          |
| <b>Lab ID:</b> 1706844-001   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                      |          |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed  | Batch    |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analys  | st: MRA  |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 1:56:39 AN   | 32339    |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in th |
|-------------|----|--|---|------------------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above quantitat  |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detected below |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not In Ra    |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- the associated Method Blank
- ation range
- low quantitation limits Page 1 of 40

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- Sample pH Not In Range Р
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |        |             |                            |           |
|------------------------------|--|--------|-------------|----------------------------|-----------|
| CLIENT: GHD                  |  |        | Client Samp | le ID: 088210-35-060917-MC | G-TP-1-10 |
| <b>Project:</b> Livingston 2 |  |        | Collection  | Date: 6/9/2017 10:05:00 AM |           |
| Lab ID: 1706844-002          | Matrix:  | SOIL   | Received    | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result   | PQL Qu | al Units    | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |  |        |             | Analy                      | st: MRA   |
| Chloride                     | ND   | 30     | mg/Kg       | 20 6/17/2017 2:58:41 AM    | 1 32339   |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detected i |
|-------------|---|--|---|--------------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above quan   |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detected l |
|             |   |  |   |                    |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- in the associated Method Blank
- ntitation range
- below quantitation limits Page 2 of 40
- Р Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

#### Released to Imaging: 7/7/2023 11:38:29 AM

| Hall Environmental Anal      | ysis Labora | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/201 |             |                            |           |
|------------------------------|-------------|---|-------------|----------------------------|-----------|
| CLIENT: GHD                  |             |   | Client Samp | le ID: 088210-35-060917-M  | G-TP-2-10 |
| <b>Project:</b> Livingston 2 |             |   | Collection  | Date: 6/9/2017 10:55:00 AM |           |
| Lab ID: 1706844-003          | Matrix:     | SOIL  | Received    | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result      | PQL Qu  | al Units    | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |             |   |             | Analy                      | /st: MRA  |
| Chloride                     | 8300        | 300   | mg/Kg       | 200 6/18/2017 10:18:05 F   | PM 32339  |

| 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                  |
| <ul><li>H Holding times for preparation or analysis exceeded</li><li>ND Not Detected at the Reporting Limit</li></ul> |     | J  | Analyte detected below quantitation limits Page 3 of 40 |   |
|   |     | Not Detected at the Reporting Limit      | Р   | Sample pH Not In Range                          |
|   | PQL | Practical Quanitative Limit              | R   | RPD outside accepted recovery limits            |

- ed recovery limits
- % Recovery outside of range due to dilution or matrix S

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RL Reporting Detection Limit

| Hall Environmental Anal      |         | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |             |                            |          |  |
|------------------------------|---------|--|-------------|----------------------------|----------|--|
| CLIENT: GHD                  |         |  | Client Samp | le ID: 088210-35-060917-MG | -TP-3-2' |  |
| <b>Project:</b> Livingston 2 |         |  | Collection  | Date: 6/9/2017 11:10:00 AM |          |  |
| <b>Lab ID:</b> 1706844-004   | Matrix: | SOIL   | Received    | Date: 6/15/2017 9:30:00 AM |          |  |
| Analyses                     | Result  | PQL Qu   | al Units    | DF Date Analyzed           | Batch    |  |
| EPA METHOD 300.0: ANIONS     |         |  |             | Analys                     | st: MRA  |  |
| Chloride                     | ND      | 30   | mg/Kg       | 20 6/17/2017 3:23:31 AN    | 32339    |  |

| Qualifiers:  | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in th |
|--|----|--|---|------------------------|
|  | D  | Sample Diluted Due to Matrix                       | Е | Value above quantita   |
| H Holding times for preparation or analysis exceeded |    | Holding times for preparation or analysis exceeded | J | Analyte detected belo  |
|  | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not In Ra    |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- the associated Method Blank
- tation range
- Now quantitation limits Page 4 of 40

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- Sample pH Not In Range ŀ
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      |         | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |             |                            |           |
|------------------------------|---------|--|-------------|----------------------------|-----------|
| CLIENT: GHD                  |         |  | Client Samp | le ID: 088210-35-060917-MC | G-TP-3-10 |
| <b>Project:</b> Livingston 2 |         |  | Collection  | Date: 6/9/2017 11:25:00 AM |           |
| Lab ID: 1706844-005          | Matrix: | SOIL   | Received    | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result  | PQL Qu   | al Units    | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |         |  |             | Analy                      | st: MRA   |
| Chloride                     | 150     | 30   | mg/Kg       | 20 6/17/2017 3:35:56 AM    | 1 32339   |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in  |
|-------------|---|--|---|----------------------|
|             | D | Sample Diluted Due to Matrix                       | E | Value above quantit  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detected bel |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- the associated Method Blank
- itation range
- elow quantitation limits Page 5 of 40
- Р Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |        |             |                            |           |
|------------------------------|--|--------|-------------|----------------------------|-----------|
| CLIENT: GHD                  |  |        | Client Samp | le ID: 088210-35-060917-MC | G-TP-4-2' |
| <b>Project:</b> Livingston 2 |  |        | Collection  | Date: 6/9/2017 11:35:00 AM |           |
| Lab ID: 1706844-006          | Matrix:  | SOIL   | Received    | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result   | PQL Qu | al Units    | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |  |        |             | Analy                      | st: MRA   |
| Chloride                     | ND   | 30     | mg/Kg       | 20 6/17/2017 3:48:20 AN    | / 32339   |

| Qualifiers:  | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in th |
|--|----|--|---|------------------------|
|  | D  | Sample Diluted Due to Matrix                       | Е | Value above quantita   |
| H Holding times for preparation or analysis exceeded |    | Holding times for preparation or analysis exceeded | J | Analyte detected belo  |
|  | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not In Ra    |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- the associated Method Blank
- tation range
- Now quantitation limits Page 6 of 40

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- Sample pH Not In Range ŀ
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora |        | 2017        |                            |           |
|------------------------------|-------------|--------|-------------|----------------------------|-----------|
| CLIENT: GHD                  |             |        | Client Samp | le ID: 088210-35-060917-M  | G-TP-4-10 |
| <b>Project:</b> Livingston 2 |             |        | Collection  | Date: 6/9/2017 11:50:00 AM | -         |
| Lab ID: 1706844-007          | Matrix:     | SOIL   | Received    | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result      | PQL Qu | al Units    | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |             |        |             | Anal                       | /st: MRA  |
| Chloride                     | 7600        | 300    | mg/Kg       | 200 6/18/2017 10:30:30     | PM 32339  |

| Qualifiers: | *   | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in the |
|-------------|-----|--|---|-------------------------|
|             | D   | Sample Diluted Due to Matrix                       | Е | Value above quantita    |
|             | Н   | Holding times for preparation or analysis exceeded | J | Analyte detected belo   |
|             | ND  | Not Detected at the Reporting Limit                | Р | Sample pH Not In Ra     |
|             | PQL | Practical Quanitative Limit                        | R | RPD outside accepted    |

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RL Reporting Detection Limit

- the associated Method Blank
- tation range
- elow quantitation limits Page 7 of 40

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- Range
- ted recovery limits
- % Recovery outside of range due to dilution or matrix S

| Hall Environmental Anal      | ysis Labora |        | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | • •                        |          |  |
|------------------------------|-------------|--------|---|----------------------------|----------|--|
| CLIENT: GHD                  |             |        | Client Samp   | le ID: 088210-35-060917-MG | -TP-5-2' |  |
| <b>Project:</b> Livingston 2 |             |        | Collection  | Date: 6/9/2017 1:05:00 PM  |          |  |
| Lab ID: 1706844-008          | Matrix:     | SOIL   | Received  | Date: 6/15/2017 9:30:00 AM |          |  |
| Analyses                     | Result      | PQL Qu | al Units  | DF Date Analyzed           | Batch    |  |
| EPA METHOD 300.0: ANIONS     |             |        |   | Analys                     | st: MRA  |  |
| Chloride                     | ND          | 30     | mg/Kg   | 20 6/17/2017 4:13:09 AN    | 1 32339  |  |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in th |
|-------------|----|--|---|------------------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above quantita   |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detected belo  |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not In Ra    |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- the associated Method Blank
- tation range
- Now quantitation limits Page 8 of 40

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- Sample pH Not In Range Р
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

**Analytical Report** Lab Order 1706844

| <b>D</b> . | D 1       |           |
|------------|-----------|-----------|
| Date       | Reported: | 6/19/2017 |

6/16/2017 6:45:47 PM

6/16/2017 6:45:47 PM

6/16/2017 6:45:47 PM

1

1

1

32311

32311

32311

|             | • /   |   |  |   |  |
|-------------|---|---|--|---|--|
|             |   | Client Sampl  | e ID: 088  | 210-35-060917-MG-   | ГР-5-1(  |
|             |   | Collection I  | Date: 6/9/   | 2017 1:20:00 PM   |  |
| Matrix: S   | SOIL  | Received I  | Date: 6/15   | 5/2017 9:30:00 AM   |  |
| Result      | PQL Qu  | al Units  | DF   | Date Analyzed   | Batch  |
|             |   |   |  | Analyst   | MRA  |
| 15000       | 750   | mg/Kg   | 500  | 6/18/2017 10:42:55 PM   | 32340  |
| GE ORGANICS | 5   |   |  | Analyst   | том  |
| ND          | 9.6   | mg/Kg   | 1  | 6/16/2017 4:23:31 PM  | 32315  |
| ND          | 48  | mg/Kg   | 1  | 6/16/2017 4:23:31 PM  | 32315  |
| 102         | 70-130  | %Rec  | 1  | 6/16/2017 4:23:31 PM  | 32315  |
| NGE         |   |   |  | Analyst   | NSB  |
| ND          | 4.8   | mg/Kg   | 1  | 6/16/2017 6:45:47 PM  | 32311  |
| 102         | 54-150  | %Rec  | 1  | 6/16/2017 6:45:47 PM  | 32311  |
|             |   |   |  | Analyst   | NSB  |
| ND          | 0.024   | mg/Kg   | 1  | 6/16/2017 6:45:47 PM  | 32311  |
| ND          | 0.048   | mg/Kg   | 1  | 6/16/2017 6:45:47 PM  | 32311  |
|             | Result<br>15000<br>GE ORGANICS<br>ND<br>ND<br>102<br>NGE<br>ND<br>102<br>ND | Matrix:         SOIL           Result         PQL         Qu           15000         750           IGE ORGANICS         0.024           ND         9.6           ND         48           102         70-130           NGE         0.024 | Client Sampl<br>Collection I<br>Matrix: SOIL Received I<br>Result PQL Qual Units<br>15000 750 mg/Kg<br>15000 750 mg/Kg<br>MD 9.6 mg/Kg<br>ND 48 mg/Kg<br>102 70-130 %Rec<br>NGE<br>ND 4.8 mg/Kg<br>102 54-150 %Rec | Client Sample ID: 088           Collection Date: 6/9/         Matrix: SOIL         Received Date: 6/12           Result         PQL         Qual         Units         DF           15000         750         mg/Kg         500           GE ORGANICS         MD         9.6         mg/Kg         1           ND         9.6         mg/Kg         1           102         70-130         %Rec         1           ND         4.8         mg/Kg         1           ND         4.8         mg/Kg         1           ND         4.8         mg/Kg         1           ND         0.024         mg/Kg         1 | Client Sample ID: 088210-35-060917-MG-<br>Collection Date: 6/9/2017 1:20:00 PM           Matrix: SOIL         Received Date: 6/15/2017 9:30:00 AM           Result         PQL         Qual         Units         DF         Date Analyzed           15000         750         mg/Kg         500         6/18/2017 10:42:55 PM           GE ORGANICS         Analyst           ND         9.6         mg/Kg         1         6/16/2017 4:23:31 PM           102         70-130         %Rec         1         6/16/2017 4:23:31 PM           ND         4.8         mg/Kg         1         6/16/2017 6:45:47 PM           102         54-150         %Rec         1         6/16/2017 6:45:47 PM           ND         4.8         mg/Kg         1         6/16/2017 6:45:47 PM           ND         4.8         mg/Kg         1         6/16/2017 6:45:47 PM           ND         0.024         mg/Kg         1         6/16/2017 6:45:47 PM |

0.048

0.097

66.6-132

mg/Kg

mg/Kg

%Rec

ND

ND

129

## Hall Environmental Analysis Laboratory, Inc.

Value exceeds Maximum Contaminant Level. В Analyte detected in the associated Method Blank

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

- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Е Value above quantitation range
- Analyte detected below quantitation limits Page 9 of 40 J
- Р Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

### Released to Imaging: 7/7/2023 11:38:29 AM

\*

**Oualifiers:** 

| Hall Environmental Anal      | ysis Labora |        | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 844                        |           |
|------------------------------|-------------|--------|---|----------------------------|-----------|
| CLIENT: GHD                  |             |        | Client Samp   | le ID: 088210-35-060917-MC | G-TP-6-2' |
| <b>Project:</b> Livingston 2 |             |        | Collection  | Date: 6/9/2017 1:40:00 PM  |           |
| Lab ID: 1706844-010          | Matrix:     | SOIL   | Received  | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result      | PQL Qu | al Units  | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |             |        |   | Analy                      | st: MRA   |
| Chloride                     | ND          | 30     | mg/Kg   | 20 6/17/2017 10:48:00 A    | M 32340   |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected in |
|-------------|----|--|---|---------------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above quantit |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detected be |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not In F  |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- n the associated Method Blank
- titation range
- pelow quantitation limits Page 10 of 40

.

- Range
- RPD outside accepted recovery limits R
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora |         | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | der 1706844                |           |
|------------------------------|-------------|---------|---|----------------------------|-----------|
| CLIENT: GHD                  |             |         | Client Samp   | le ID: 088210-35-060917-M  | G-TP-6-10 |
| <b>Project:</b> Livingston 2 |             |         | Collection  | Date: 6/9/2017 1:55:00 PM  |           |
| Lab ID: 1706844-011          | Matrix:     | SOIL    | Received  | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result      | PQL Qua | al Units  | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |             |         |   | Analy                      | vst: MRA  |
| Chloride                     | 5000        | 150     | mg/Kg   | 100 6/18/2017 10:55:19 F   | PM 32340  |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detected |
|-------------|---|--|---|------------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above qu   |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detecte  |
|             |   |  |   | ~                |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- ted in the associated Method Blank
- quantitation range
- ted below quantitation limits Page 11 of 40
- Sample pH Not In Range Р
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | Analytical Report Lab Order 1706844 Date Reported: 6/19/2 |             |                                   |
|------------------------------|-------------|---|-------------|-----------------------------------|
| CLIENT: GHD                  |             |   | Client Samp | le ID: 088210-35-060917-MG-TP-2-2 |
| <b>Project:</b> Livingston 2 |             |   | Collection  | Date: 6/9/2017 10:40:00 AM        |
| Lab ID: 1706844-012          | Matrix:     | SOIL  | Received    | Date: 6/15/2017 9:30:00 AM        |
| Analyses                     | Result      | PQL Qu  | al Units    | DF Date Analyzed Batch            |
| EPA METHOD 300.0: ANIONS     |             |   |             | Analyst: MRA                      |
| Chloride                     | ND          | 30  | mg/Kg       | 20 6/17/2017 11:37:38 AM 32340    |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detected |
|-------------|---|--|---|------------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above qu   |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detected |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- ted in the associated Method Blank
- uantitation range
- ted below quantitation limits Page 12 of 40
- Р Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora |        | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 706844                     |           |
|------------------------------|-------------|--------|---|----------------------------|-----------|
| CLIENT: GHD                  |             |        | Client Sampl  | le ID: 088210-35-060917-MC | G-TP-7-2' |
| <b>Project:</b> Livingston 2 |             |        | <b>Collection</b>   | Date: 6/9/2017 2:05:00 PM  |           |
| Lab ID: 1706844-013          | Matrix:     | SOIL   | <b>Received</b>   | Date: 6/15/2017 9:30:00 AM |           |
| Analyses                     | Result      | PQL Qu | al Units  | DF Date Analyzed           | Batch     |
| EPA METHOD 300.0: ANIONS     |             |        |   | Analy                      | st: MRA   |
| Chloride                     | ND          | 30     | mg/Kg   | 20 6/17/2017 12:14:51 P    | M 32340   |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detect |
|-------------|----|--|---|----------------|
|             | D  | Sample Diluted Due to Matrix                       | E | Value above q  |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detect |
|             | ND | Not Detected at the Penerting Limit                | D | Sample pH M    |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 13 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

**CLIENT: GHD** 

Livingston 2

**Project:** 

Analytical Report
Lab Order 1706844

Date Reported: 6/19/2017

Client Sample ID: 088210-35-060917-MG-TP-7-10 Collection Date: 6/9/2017 2:40:00 PM Received Date: 6/15/2017 9:30:00 AM

| Lab ID: 1706844-014            | Matrix:    | <b>Received</b> | Received Date: 6/15/2017 9:30:00 AM |     |                       |         |
|--------------------------------|------------|-----------------|-------------------------------------|-----|-----------------------|---------|
| Analyses                       | Result     | PQL Qu          | al Units                            | DF  | Date Analyzed         | Batch   |
| EPA METHOD 300.0: ANIONS       |            |                 |                                     |     | Analys                | t: MRA  |
| Chloride                       | 17000      | 750             | mg/Kg                               | 500 | 6/18/2017 11:07:43 PM | 1 32340 |
| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | s               |                                     |     | Analys                | t: TOM  |
| Diesel Range Organics (DRO)    | ND         | 10              | mg/Kg                               | 1   | 6/16/2017 4:45:37 PM  | 32315   |
| Motor Oil Range Organics (MRO) | ND         | 50              | mg/Kg                               | 1   | 6/16/2017 4:45:37 PM  | 32315   |
| Surr: DNOP                     | 102        | 70-130          | %Rec                                | 1   | 6/16/2017 4:45:37 PM  | 32315   |
| EPA METHOD 8015D: GASOLINE RAI | NGE        |                 |                                     |     | Analys                | t: NSB  |
| Gasoline Range Organics (GRO)  | ND         | 4.9             | mg/Kg                               | 1   | 6/16/2017 7:10:02 PM  | 32311   |
| Surr: BFB                      | 96.5       | 54-150          | %Rec                                | 1   | 6/16/2017 7:10:02 PM  | 32311   |
| EPA METHOD 8021B: VOLATILES    |            |                 |                                     |     | Analys                | t: NSB  |
| Benzene                        | ND         | 0.024           | mg/Kg                               | 1   | 6/16/2017 7:10:02 PM  | 32311   |
| Toluene                        | ND         | 0.049           | mg/Kg                               | 1   | 6/16/2017 7:10:02 PM  | 32311   |
| Ethylbenzene                   | ND         | 0.049           | mg/Kg                               | 1   | 6/16/2017 7:10:02 PM  | 32311   |
| Xylenes, Total                 | ND         | 0.097           | mg/Kg                               | 1   | 6/16/2017 7:10:02 PM  | 32311   |
| Surr: 4-Bromofluorobenzene     | 122        | 66.6-132        | %Rec                                | 1   | 6/16/2017 7:10:02 PM  | 32311   |

| <b>Oualifiers:</b> | * | 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
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 14 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/20 | 17      |
|------------------------------|-------------|------------|-------------|--|---------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-'                                     | ГР-8-2' |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 10:50:00 AM                                      |         |
| <b>Lab ID:</b> 1706844-015   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                       |         |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed   | Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst  | MRA     |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 12:39:40 PM   | 32340   |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detec  |
|-------------|----|--|---|----------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above of |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detec  |
|             | ND |  | р | 0 1 UN         |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 15 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 2017      |
|------------------------------|-------------|------------|-------------|---|-----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MC                                      | G-TP-8-10 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 11:10:00 AN                                     | 1         |
| Lab ID: 1706844-016          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                      |           |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed  | Batch     |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analy   | rst: MRA  |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 12:52:04 F   | PM 32340  |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detec  |
|-------------|----|--|---|----------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above of |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detec  |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH N    |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 16 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/20 | 017      |
|------------------------------|-------------|------------|-------------|--|----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG                                       | -TP-9-2' |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 11:20:00 AM                                      |          |
| Lab ID: 1706844-017          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                       |          |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed   | Batch    |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analys   | st: MRA  |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 1:04:29 PM  | 32340    |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detect |
|-------------|---|--|---|----------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above q  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detect |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- cted in the associated Method Blank
- quantitation range
- cted below quantitation limit Page 17 of 40
- Р Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |     |
|------------------------------|-------------|------------|-------------|--|-----|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-9-                                   | -10 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 11:35:00 AM  |     |
| Lab ID: 1706844-018          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |     |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Bate  | ch  |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MR  | A   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 1:16:53 PM 3234                                       | 40  |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detect |
|-------------|----|--|---|----------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above q  |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detect |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH No   |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 18 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |     |
|------------------------------|-------------|------------|-------------|--|-----|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-1                                    | 0-2 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 11:55:00 AM  |     |
| Lab ID: 1706844-019          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |     |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Bat   | ch  |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MR  | A   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 1:29:17 PM 323  | 340 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detected |
|-------------|---|--|---|------------------|
|             | D | Sample Diluted Due to Matrix                       | E | Value above qu   |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detected |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- eted in the associated Method Blank
- quantitation range
- cted below quantitation limit Page 19 of 40
- Р Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |      |
|------------------------------|-------------|------------|-------------|--|------|
| CLIENT: GHD                  |             |            | Client Samp | e ID: 088210-35-061217-MG-TP-1                                     | 10-1 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 1:05:00 PM   |      |
| Lab ID: 1706844-020          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |      |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Ba  | itch |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: M   | RA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 1:41:41 PM 32   | 340  |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte de |
|-------------|---|--|---|------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value abov |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte de |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 20 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-11-2                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 1:15:00 PM   |
| Lab ID: 1706844-021          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 1:54:06 PM 32340                                      |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected |
|-------------|----|--|---|------------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above quar |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detected |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not In |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- l in the associated Method Blank
- antitation range
- d below quantitation limit Page 21 of 40

.

- In Range le p
- RPD outside accepted recovery limits R
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-11                                   |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 1:30:00 PM   |
| Lab ID: 1706844-022          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Bate  |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MR  |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 2:06:30 PM 3234                                       |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte dete |
|-------------|---|--|---|--------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte dete |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 22 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-12-2                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 1:45:00 PM   |
| <b>Lab ID:</b> 1706844-023   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 2:43:43 PM 32340                                      |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detect |
|-------------|----|--|---|----------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above q  |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detect |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH No   |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 23 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-12-1                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 2:00:00 PM   |
| <b>Lab ID:</b> 1706844-024   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 2:56:08 PM 32340                                      |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte dete |
|-------------|---|--|---|--------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte dete |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 24 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-13-2                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 2:10:00 PM   |
| <b>Lab ID:</b> 1706844-025   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 3:08:34 PM 32340                                      |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte deter |
|-------------|---|--|---|---------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above   |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte deter |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 25 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061217-MG-TP-13-                                  |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/12/2017 2:30:00 PM   |
| Lab ID: 1706844-026          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batcl   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 3:20:58 PM 3234                                       |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte det |
|-------------|----|--|---|-------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value abov  |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte det |
|             | ND | Net Detected at the Dementional Limit              | п | ComplemE    |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 26 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG-TP-14-2                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 8:15:00 AM   |
| Lab ID: 1706844-027          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 3:33:23 PM 32340                                      |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detect |
|-------------|----|--|---|----------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above    |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detect |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH N    |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- ected in the associated Method Blank
- e quantitation range
- ected below quantitation limits Page 27 of 40

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- Sample pH Not In Range ŀ
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 2017      |
|------------------------------|-------------|------------|-------------|---|-----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MC                                      | G-TP-14-1 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 8:40:00 AM                                      |           |
| Lab ID: 1706844-028          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                      |           |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed  | Batch     |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analy   | st: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 3:45:47 PM   | / 32340   |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte dete |
|-------------|---|--|---|--------------|
|             | D | Sample Diluted Due to Matrix                       | E | Value above  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte dete |
|             |   |  | _ |              |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 28 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG-TP-15-2                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 9:00:00 AM   |
| Lab ID: 1706844-029          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 4:23:00 PM 32341                                      |

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

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- etected in the associated Method Blank
- ve quantitation range
- etected below quantitation limitsPage 29 of 40

.

- Sample pH Not In Range ŀ
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG-TP-15-1                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 9:15:00 AM   |
| Lab ID: 1706844-030          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 5:25:03 PM 32341                                      |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detec  |
|-------------|---|--|---|----------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above of |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detec  |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 30 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG-TP-16-2                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 9:25:00 AM   |
| <b>Lab ID:</b> 1706844-031   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 5:37:27 PM 32341                                      |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detected |
|-------------|----|--|---|------------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above quar |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detected |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH Not I  |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- ed in the associated Method Blank
- antitation range
- ed below quantitation limits Page 31 of 40

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- In Range le p ıp
- RPD outside accepted recovery limits R
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |
|------------------------------|-------------|------------|-------------|--|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG-TP-16-1                                 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 9:40:00 AM   |
| <b>Lab ID:</b> 1706844-032   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Batch   |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MRA   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 5:49:52 PM 32341                                      |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte dete |
|-------------|---|--|---|--------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte dete |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 32 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2017 |     |
|------------------------------|-------------|------------|-------------|--|-----|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG-TP-17                                   | 7-2 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 9:50:00 AM   |     |
| <b>Lab ID:</b> 1706844-033   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM   |     |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed Bate  | ch  |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analyst: MR  | A   |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 6:02:17 PM 3234                                       | 41  |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte detec |
|-------------|----|--|---|---------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above   |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte detec |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH N   |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- ected in the associated Method Blank
- e quantitation range
- ected below quantitation limits Page 33 of 40

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- Sample pH Not In Range ŀ
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/20 | 017      |
|------------------------------|-------------|------------|-------------|--|----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG                                       | -TP-17-1 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 10:00:00 AM                                      |          |
| <b>Lab ID:</b> 1706844-034   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                       |          |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed   | Batch    |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analys   | st: MRA  |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 6:14:42 PM  | 32341    |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte detec  |
|-------------|---|--|---|----------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value above of |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte detec  |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 34 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 017      |
|------------------------------|-------------|------------|-------------|---|----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG                                      | -TP-18-2 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 10:25:00 AM                                     | [        |
| Lab ID: 1706844-035          | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                      |          |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed  | Batch    |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analys  | st: MRA  |
| Chloride                     | ND          | 30         | mg/Kg       | 20 6/17/2017 6:27:07 PM   | 32341    |

| Qualifiers: | *  | Value exceeds Maximum Contaminant Level.           | В | Analyte dete |
|-------------|----|--|---|--------------|
|             | D  | Sample Diluted Due to Matrix                       | Е | Value above  |
|             | Н  | Holding times for preparation or analysis exceeded | J | Analyte dete |
|             | ND | Not Detected at the Reporting Limit                | Р | Sample pH N  |

- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 35 of 40

.

- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

| Hall Environmental Anal      | ysis Labora | tory, Inc. |             | Analytical Report<br>Lab Order 1706844<br>Date Reported: 6/19/2 | 017      |
|------------------------------|-------------|------------|-------------|---|----------|
| CLIENT: GHD                  |             |            | Client Samp | le ID: 088210-35-061317-MG                                      | -TP-18-1 |
| <b>Project:</b> Livingston 2 |             |            | Collection  | Date: 6/13/2017 11:00:00 AM                                     | ſ        |
| <b>Lab ID:</b> 1706844-036   | Matrix:     | SOIL       | Received    | Date: 6/15/2017 9:30:00 AM                                      |          |
| Analyses                     | Result      | PQL Qu     | al Units    | DF Date Analyzed  | Batch    |
| EPA METHOD 300.0: ANIONS     |             |            |             | Analys  | st: MRA  |
| Chloride                     | 360         | 30         | mg/Kg       | 20 6/17/2017 6:39:31 PN   | 32341    |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level.           | В | Analyte de |
|-------------|---|--|---|------------|
|             | D | Sample Diluted Due to Matrix                       | Е | Value abo  |
|             | Н | Holding times for preparation or analysis exceeded | J | Analyte de |
|             |   |  |   | a 1 7      |

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 36 of 40
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

GHD

Livingston 2

**Client:** 

**Project:** 

Client ID:

Prep Date:

Analyte

Chloride

Sample ID MB-32339

PBS

6/16/2017

## **QC SUMMARY REPORT** Hall Environmental Analysis Lab

| <b>REP(</b> al Analy | -               |           | ory, Inc.   |          |           |                    |      | WO#:     | 1706844<br>19-Jun-17 |
|----------------------|-----------------|-----------|-------------|----------|-----------|--------------------|------|----------|----------------------|
| on 2                 |                 |           |             |          |           |                    |      |          |                      |
| SampT                | ype: <b>m</b> l | blk       | Test        | tCode: E | PA Method | 300.0: Anion       | s    |          |                      |
| Batch                | n ID: 32        | 339       | R           | unNo: 4  | 3583      |                    |      |          |                      |
| Analysis D           | ate: 6          | /16/2017  | S           | eqNo: 1  | 372810    | Units: <b>mg/K</b> | g    |          |                      |
| Result               | PQL             | SPK value | SPK Ref Val | %REC     | LowLimit  | HighLimit          | %RPD | RPDLimit | Qual                 |
| ND                   | 1.5             |           |             |          |           |                    |      |          |                      |

| Sample ID LCS-32339  | SampType: Ics                                    | TestCode: EPA Method      | l 300.0: Anions              |  |  |  |  |  |  |  |  |  |  |
|----------------------|--|---------------------------|------------------------------|--|--|--|--|--|--|--|--|--|--|
| Client ID: LCSS      | Batch ID: 32339                                  | RunNo: 43583              |                              |  |  |  |  |  |  |  |  |  |  |
| Prep Date: 6/16/2017 | Analysis Date: 6/16/2017                         | SeqNo: 1372811            | Units: mg/Kg                 |  |  |  |  |  |  |  |  |  |  |
| Analyte              | Result PQL SPK value                             | SPK Ref Val %REC LowLimit | HighLimit %RPD RPDLimit Qual |  |  |  |  |  |  |  |  |  |  |
| Chloride             | 14 1.5 15.00                                     | 0 94.9 90                 | 110                          |  |  |  |  |  |  |  |  |  |  |
| Sample ID MB-32340   | SampType: <b>mblk</b>                            | TestCode: EPA Method      | l 300.0: Anions              |  |  |  |  |  |  |  |  |  |  |
| Client ID: PBS       | Batch ID: 32340                                  | RunNo: 43585              |                              |  |  |  |  |  |  |  |  |  |  |
| Prep Date: 6/17/2017 | Analysis Date: 6/17/2017                         | SeqNo: 1372868            | Units: mg/Kg                 |  |  |  |  |  |  |  |  |  |  |
| Analyte              | Result PQL SPK value                             | SPK Ref Val %REC LowLimit | HighLimit %RPD RPDLimit Qual |  |  |  |  |  |  |  |  |  |  |
| Chloride             | ND 1.5   |                           |                              |  |  |  |  |  |  |  |  |  |  |
| Sample ID LCS-32340  | SampType: Ics TestCode: EPA Method 300.0: Anions |                           |                              |  |  |  |  |  |  |  |  |  |  |
| Client ID: LCSS      | Batch ID: 32340                                  | RunNo: 43585              |                              |  |  |  |  |  |  |  |  |  |  |
| Prep Date: 6/17/2017 | Analysis Date: 6/17/2017                         | SeqNo: 1372869            | Units: <b>mg/Kg</b>          |  |  |  |  |  |  |  |  |  |  |
| Analyte              | Result PQL SPK value                             | SPK Ref Val %REC LowLimit | HighLimit %RPD RPDLimit Qual |  |  |  |  |  |  |  |  |  |  |
| Chloride             | 14 1.5 15.00                                     | 0 94.4 90                 | 110                          |  |  |  |  |  |  |  |  |  |  |
| Sample ID MB-32341   | SampType: mblk                                   | TestCode: EPA Method      | l 300.0: Anions              |  |  |  |  |  |  |  |  |  |  |
| Client ID: PBS       | Batch ID: 32341                                  | RunNo: 43585              |                              |  |  |  |  |  |  |  |  |  |  |
| Prep Date: 6/17/2017 | Analysis Date: 6/17/2017                         | SeqNo: 1372898            | Units: mg/Kg                 |  |  |  |  |  |  |  |  |  |  |
| Analyte              | Result PQL SPK value                             | SPK Ref Val %REC LowLimit | HighLimit %RPD RPDLimit Qual |  |  |  |  |  |  |  |  |  |  |
| Chloride             | ND 1.5   |                           |                              |  |  |  |  |  |  |  |  |  |  |
| Sample ID LCS-32341  | SampType: Ics TestCode: EPA Method 300.0: Anions |                           |                              |  |  |  |  |  |  |  |  |  |  |
| Client ID: LCSS      | Batch ID: 32341                                  | RunNo: 43585              |                              |  |  |  |  |  |  |  |  |  |  |
| Prep Date: 6/17/2017 | Analysis Date: 6/17/2017                         | SeqNo: 1372899            | Units: mg/Kg                 |  |  |  |  |  |  |  |  |  |  |
| Analyte              | Result PQL SPK value                             | SPK Ref Val %REC LowLimit | HighLimit %RPD RPDLimit Qual |  |  |  |  |  |  |  |  |  |  |
| Chloride             | 14 1.5 15.00                                     | 0 93.5 90                 | 110                          |  |  |  |  |  |  |  |  |  |  |

#### **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
- Practical Quanitative Limit PQL
- RL Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

R

S

- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix

Page 37 of 40

| Client: GHD<br>Project: Livings | ston 2     |         |           |             |           |           |                     |            |            |      |  |  |
|---------------------------------|------------|---------|-----------|-------------|-----------|-----------|---------------------|------------|------------|------|--|--|
| Sample ID MB-32315              |            | ype: ME | BLK       | Tes         | tCode: El | PA Method | 8015M/D: Di         | esel Range | e Organics |      |  |  |
| Client ID: PBS                  | Batch      | ID: 32  | 315       | F           | RunNo: 4  | 3560      |                     |            |            |      |  |  |
| Prep Date: 6/15/2017            | Analysis D | ate: 6/ | 16/2017   | 5           | SeqNo: 1  | 372149    | Units: <b>mg/Kg</b> |            |            |      |  |  |
| 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                      | 9.6        |         | 10.00     |             | 96.0      | 70        | 130                 |            |            |      |  |  |
| Sample ID LCS-32315             | SampT      | ype: LC | S         | Tes         | tCode: El | PA Method | 8015M/D: Di         | esel Rang  | e Organics |      |  |  |
| Client ID: LCSS                 | Batch      | ID: 32  | 315       | F           | RunNo: 4  | 3560      |                     |            |            |      |  |  |
| Prep Date: 6/15/2017            | Analysis D | ate: 6/ | 16/2017   | S           | SeqNo: 1  | 372317    | Units: mg/k         | (g         |            |      |  |  |
| Analyte                         | Result     | PQL     | SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit           | %RPD       | RPDLimit   | Qual |  |  |
| Diesel Range Organics (DRO)     | 50         | 10      | 50.00     | 0           | 99.8      | 73.2      | 114                 |            |            |      |  |  |
| Surr: DNOP                      | 4.8        |         | 5.000     |             | 95.6      | 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
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- RL Reporting Detection Limit

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- J Analyte detected below quantitation limits
- P Sample pH Not In Range

R

- RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

# Page 67 of 136

1706844

19-Jun-17

WO#:

| <br>1: |  |  |  |
|--------|--|--|--|

Page 38 of 40

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

| Client:GHDProject:Living      | gston 2       |                 |                 |                                 |                    |                     |          |      |  |  |  |  |  |  |  |
|-------------------------------|---------------|-----------------|-----------------|---------------------------------|--------------------|---------------------|----------|------|--|--|--|--|--|--|--|
| Sample ID MB-32311            | SampType      | e: MBLK         | tCode: EPA Meth | PA Method 8015D: Gasoline Range |                    |                     |          |      |  |  |  |  |  |  |  |
| Client ID: PBS                | Batch ID      | ): <b>32311</b> | F               | RunNo: <b>43568</b>             |                    |                     |          |      |  |  |  |  |  |  |  |
| Prep Date: 6/15/2017          | Analysis Date | e: 6/16/2017    | 5               | SeqNo: 1373048                  | Units: <b>mg/ł</b> | Units: <b>mg/Kg</b> |          |      |  |  |  |  |  |  |  |
| Analyte                       | Result F      | PQL SPK value   | SPK Ref Val     | %REC LowLir                     | nit HighLimit      | %RPD                | RPDLimit | Qual |  |  |  |  |  |  |  |
| Gasoline Range Organics (GRO) | ND            | 5.0             |                 |                                 |                    |                     |          |      |  |  |  |  |  |  |  |
| Surr: BFB                     | 970           | 1000            |                 | 96.9                            | 54 150             |                     |          |      |  |  |  |  |  |  |  |
| Sample ID LCS-32311           | SampType      | e: LCS          | Tes             | tCode: EPA Meth                 | od 8015D: Gase     | oline Rang          | e        |      |  |  |  |  |  |  |  |
| Client ID: LCSS               | Batch ID      | ): <b>32311</b> | F               | RunNo: <b>43568</b>             |                    |                     |          |      |  |  |  |  |  |  |  |
| Prep Date: 6/15/2017          | Analysis Date | e: 6/16/2017    | S               | SeqNo: 1373049                  | Units: <b>mg/ł</b> | ۲g                  |          |      |  |  |  |  |  |  |  |
| Analyte                       | Result F      | PQL SPK value   | SPK Ref Val     | %REC LowLir                     | nit HighLimit      | %RPD                | RPDLimit | Qual |  |  |  |  |  |  |  |
| Gasoline Range Organics (GRO) | 25            | 5.0 25.00       | 0               | 102 76                          | 6.4 125            |                     |          |      |  |  |  |  |  |  |  |
| Surr: BFB                     | 1100          | 1000            |                 | 108                             | 54 150             |                     |          |      |  |  |  |  |  |  |  |

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 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

R

S

- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix

# Page 68 of 136

| WO#: | 1706844   |
|------|-----------|
|      | 19-Jun-17 |

Page 39 of 40

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

| Page | <u>69</u> | of 136 |
|------|-----------|--------|
|      |           |        |

| WO#: | 1706844   |
|------|-----------|
|      | 19-Jun-17 |

Page 40 of 40

|                          | HD<br>ivingston 2 |          |           |             |                |           |             |       |          |      |
|--------------------------|-------------------|----------|-----------|-------------|----------------|-----------|-------------|-------|----------|------|
| Sample ID MB-32311       | Samp              | Type: MI | BLK       | Tes         | tCode: El      | PA Method | 8021B: Vola | iles  |          |      |
| Client ID: PBS           | Bato              | h ID: 32 | 311       | R           | unNo: 4        |           |             |       |          |      |
| Prep Date: 6/15/201      | 7 Analysis        | Date: 6/ | 16/2017   | S           | eqNo: 1        | 373066    | ſg          |       |          |      |
| 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-Bromofluorobenze | ene 1.2           |          | 1.000     |             | 124            | 66.6      | 132         |       |          |      |
| Sample ID LCS-3231       | 1 Samp            | Type: LC | s         | Tes         | tCode: El      | PA Method | 8021B: Vola | tiles |          |      |
| Client ID: LCSS          | Bato              | h ID: 32 | 311       | R           | unNo: <b>4</b> | 3568      |             |       |          |      |
| Prep Date: 6/15/201      | 7 Analysis        | Date: 6/ | 16/2017   | S           | eqNo: 1        | 373067    | 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           | 107            | 80        | 120         |       |          |      |
| Toluene                  | 1.1               | 0.050    | 1.000     | 0           | 108            | 80        | 120         |       |          |      |
| Ethylbenzene             | 1.1               | 0.050    | 1.000     | 0           | 109            | 80        | 120         |       |          |      |
| Xylenes, Total           | 3.3               | 0.10     | 3.000     | 0           | 110            | 80        | 120         |       |          |      |
| Surr: 4-Bromofluorobenze | ene 1.3           |          | 1.000     |             | 126            | 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
- PQL Practical Quanitative Limit
- RL Reporting Detection Limit

- 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

R

S

- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix

.

| E ENVIRONMENTAL<br>ANALYSIS   | lall Environmental Analysis La<br>4901 Haw<br>Albuquerque, N<br>EL: 505-345-3975 FAX: 505-3<br>Website: www.hallenvironme | vkins NE<br>M 87109 <b>Sa</b><br>45-4107 | mple Log-In C              | Pa<br>heck List     |
|---|---|--|----------------------------|---------------------|
| Client Name: GHD Wo   | rk Order Number: 1706844  |  | . RcptNo:                  | 1                   |
| Received By: Erin Melendrez 6/15/2  | 2017 9:30:00 AM   | VL UL                                    | 6                          |                     |
| Completed By: Ashley Gallegos 6/15/2  | 2017 10:29:02 AM  | AJ                                       |                            |                     |
| Reviewed By:  | 06/15/17  | v  |                            |                     |
| 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 ☑   | 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 pres   | erved? 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             |                     |
| 12.Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)        | Yes 🗸   | No 🗌                                     | bottles checked<br>for pH: | or >12 unless not   |
| 13, Are matrices correctly identified on Chain of Custor                                  | ly? Yes 🗹   | No 🗌                                     | Chatauth A                 | 51 × 12 011033 1101 |
| 14. Is it clear what analyses were requested?   | Yes 🔽   | No 🗌                                     | -                          |                     |
| 15. Were all holding times able to be met?<br>(If no, notify customer for authorization.) | Yes 🔽   | No 🗌                                     | Checked by:                |                     |
| Special Handling (if applicable)  |   |  |                            |                     |
| 16. Was client notified of all discrepancies with this ord                                | er? Yes 🗌   | No 🗌                                     | NA 🗹                       |                     |
| Person Notified:<br>By Whom:  | Date Via: eMail [   | ] Phone [] Fa                            | x                          |                     |
| Regarding:<br>Client Instructions:  |   |  |                            |                     |

- 17. Additional remarks:
- 18. Cooler Information

| Cooler No | Temp <sup>®</sup> C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 5.1                 | Good      | Yes         |         |           |           |

Page 1 of 1

| Rece                    | ived by                                  | y 00                      | C <b>D:</b> 6                          | /8/2                                | 2023             | 10:0   | 2:48           | AM                        | ,<br>(N ·                        | Y or                                  | ) səlddu8 riA              | 1                                     | I                          | 1                             | 1                            | 1                              | I                             | I                            | 1                             | I                         | l                         | 1                                     | I                          | P                  | age 71 oj     | f <sub>1</sub> 36  |
|-------------------------|--|---------------------------|--|-------------------------------------|------------------|--|----------------|---------------------------|----------------------------------|---------------------------------------|----------------------------|---------------------------------------|----------------------------|-------------------------------|------------------------------|--------------------------------|-------------------------------|------------------------------|-------------------------------|---------------------------|---------------------------|---------------------------------------|----------------------------|--------------------|---------------|--|
|                         | ב≿                                       |                           |  |                                     |                  |  |                |                           |                                  |                                       | <u> </u>                   |                                       |                            | <u> </u>                      |                              |                                |                               |                              |                               |                           |                           |                                       |                            | -                  |               |  |
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| Chain-of-Custody Record | Client GHD Services, Inc.                |                           | Mailing Address: 6121 Indian School Rd | Str 200 Ng   hua veca ur. NM R711 O | Phone #: 505     | email or Fax#. Bernard, BockischOahd, com Project Manage | QA/QC Package: |                           | <pre>Accreditation □ NELAP</pre> | EDD (Type)                            |                            | <b>~</b> ₫                            | <u>-</u> 9<br>-            | <u>0</u>                      | =                            | 1                              | -                             | <u>-</u>                     | ~                             |                           | $\overline{\mathbb{N}}$   | 2                                     | -                          |                    | Time:         | lf nec   |
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| E E .   | nent<br>Nent              | and ne  | 505-345-4107         | Req               | S,                     | ьсв                       | 2808             | / S              | əbi                | sitee9 1808             | <u> </u>                      | Ì                             |                            |                                |  |                               |                                   | _                         |                            |  |                            |                                | 2                     |            |               | notate  |
| HALL ENVIRONMENTAL  | www hallenvironmental com | Albuquerque, NM 87109   | Fax                  | Analysis Request  | (*os                   | s'⁺Od                     | <sup>'²</sup> ON | ' <sup>ɛ</sup> O | NʻI                | O, A) snoinA            |                               |                               |                            |                                |  |                               |                                   |                           |                            |  |                            |                                | Hold for Possible BTE |            |               | Any sub-contracted data will be clearly notated on the analytical report.                                   |
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| Ð   |                           | オ   |                      |                   | 3                      | Level 4 (Full Validation) |                  | 1                |                    | Sample Request ID       | H. JI                         | 6-045310-35-060917.M6719-7 16 | 2-8-370-35-04121-M6-TP-8-2 | 5 208310-35-01111 A 6-17- 8-10 | 5088210-X-061217-WE-TP-9-2'                          | 5-058310-35-061217-M6-TP-4-16 | 5-08822 10-35 20121 7-M 6-TP-16 2 | 9-91-97-910-35-01177-01-5 | J-149-3 M-7410-35-012200-2 | 0-11-11-WE-LA-10-35-061317-ME-LD-16-10 | 2-088210-35661217-MC+17-12 | 212                            | Ì                     |            |               | ay be:  |
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|   |                           | 11  |                      | ב ל               | T<br>T                 |                           |                  | וו               |                    |                         |                               | ې                             | ہ<br>ح                     | Š                              | Ŝ  | - <u>v</u>                    | -\2<br>0                          | <u>^</u>                  | <u>~</u>                   | d<br>V                                 | 5                          | \$                             | ied by                | shed by:   |               | mitted  |
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| Chain-of-Custody Record                                   |                           | g Ad  | bug very very        |                   |                        | Standard                  | Jitati<br>^ _    | 5                | E                  |                         | =                             | <u> </u>                      | 0                          | 11                             | 3  | 1135                          | Ĩ                                 | 2                         | 2                          | 2                                      | 10                         | Ĩ                              |                       | Time:      |               | If necessary, samples ubmitted to Hall Environmental may be subcontracted to other accredited laboratories. |
| Chain-of-Custody  |                           | Mailing Address;  | <u>ڳ</u>             |                   | GA/OC Packade          | Stal                      | Accreditation    |                  | 🗆 EDD (Type)       | Date                    | 19                            | 6                             | d                          | 4                              | 1  | <u>d</u>                      | <u>(1)</u>                        | ğ                         | শ্ব                        | 2                                      | പ്പ                        | G                              | Ē                     |            |               | _   |
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|                         |                       | )             | n<br>1871   | 201           |                 |   |                | <u> </u>   |                                 | ¥0/                | /-imə2)<br>//     | <u>ر ۱</u><br>3520 ا    | / へ<br>3                    |                              |                             |  |                              |   |  | <u> </u> ^                     |                                |                                 | {×<br>                         |  | 12              |                  | e analy   |
|                         | <u></u>               | )<br>(        | al.cor  | И Л Л Л       | 1est            |   |                |  |                                 |                    |                   |                         |                             |                              | ┢                           | -  | <u> </u>                     |   |  |                                |                                |                                 | +                              | $\vdash$   | 0               |                  | d on the  |
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|                         | HALL ENVI<br>ANALYSTS |               | www.italienvironmental.com<br>ns NE - Albuquerque, NM 87109 |               |                 | (*  | 05,40          | )Ч,  | <sup>2</sup> ON <sup>4</sup>    | ON                 | (F,CI,            | noinA                   | /                           |                              |                             | <u> </u>   |                              |   |  |                                |                                | <b> </b>                        |                                | <u>†</u>   | ldissog         |                  | clearly   |
|                         | щ<br>У                |               | allen<br>- All  |               | 15              |   |                |  |                                 |                    | abeM 8 /          |                         |                             |                              |                             |  |                              |   |  |                                |                                |                                 |                                |  | j ě             | ~                | will be   |
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|                         | ير                    |               |   |               |                 | _   |                |  |                                 |                    |                   | $h \mathscr{S}^{V_{1}}$ | Ċ                           | $\dot{Q}$                    | Q -                         | $\left  \begin{array}{c} \\ \\ \\ \end{array} \right $ | <b>0</b>                     | 9   | Ĩ  | 2                              | Y                              | ľÇ                              | ļĊ                             | $\left[ \begin{array}{c} O \\ O \end{array} \right]$ |                 | 1 3              | es as r   |
|                         | 181                   |               |   |               |                 |   | E.             |  | CIV.                            | 2                  |                   | 20                      | 1                           | 1                            |                             |  |                              |   |  |                                |                                | L,                              | ł                              |  | Date            | Date             | his serv  |
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| Turn-Around Time:       | lard                  | Project Name: | Livingston  |               | 088210-35       | lanag   | Bernard        |  |                                 | Sample Temperature |                   | #<br>7                  |                             |                              |                             | $\neg$   | -                            |   | -  |                                |                                |                                 |                                | 2  | $\mathcal{H}$   | $\mathbb{N}$     | er accre  |
| -Aro                    | Standard              | ect N         | 15  | Project #:    | 8               | ect M   | J              |  | Sampler:<br>On Ice              | ple T              | Container         | l ype and #             | Sol                         |                              |                             |  |                              |   |  |                                |                                |                                 |                                |  | چۇ              |                  | to othe   |
| Turr                    |                       | Pro           |   | Proj          | Õ               | Proj  |                |  | Sampler<br>On Ice               | Sam                | ြပိ               | l yp                    | 402 Sol Juc                 |                              |                             |  |                              |   |  |                                |                                |                                 |                                |  | Received        | Received         | Itracted  |
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| ord                     |                       |               |   |               |                 | Ŕ   | -<br>-         | Level 4 (Full Validation)  |                                 |                    | Sample Request ID |                         | 16-772                      | 5-08210-35-06121746-70-13-10 | 2-022200-35-06817-METP-14-2 | 01-HALTN-212190-35-018250.5                            | 5-08310 35-061317-416 78-5-2 | 01-21-211-21-21-21-21-21-21-21-21-21-21-2 | 2-21-57-2114-51513-55-25-25-25-25-25-25-25-25-25-25-25-25- | 5058240-35 661317.M.C-TP-16-10 | C-47-21-974-112190-52-010380-5 | 5-0 5240-35-061347.A.C-TP-17-18 | 2-\$1-22-718.112190.58-0188305 | 5-05520-35-061317-116-18-10                          |                 |                  | nay be  |
| ecc                     |                       |               | el Rd   |               |                 | 00  |                | III Va   |                                 |                    | eau               | -                       | V-LICKS                     | riers                        | 5817-5                      | 1312-4   | W+212                        | W-11                                      | W-L12  | W.LI                           | W-11                           | str.m                           | 17 A.C                         | יח אונ   |                 | $\langle  $      | rental r  |
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| ust                     | J                     |               | L HOL   | NN            | CL 90           | en le   | -              |  | <u>ب</u>                        |                    |                   |                         | 5.08                        | <br>6<br>6                   | 5-04                        | 3.05   | 5-088                        | 5-083                                     | 2-08   | 5089                           | 3-085                          | 5-08                            | 5.085                          | 5-0%   | Ag A            | D DA             | ulted to  |
| Ģ                       |                       |               | 17  |               | 284             | g   |                |  | Other                           |                    | Matrix            |                         |                             |                              |                             |  |                              |   |  |                                |                                |                                 |                                |  | Kelinguished by | Relinquished by: | s Subr  |
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| Chain-of-Custody Record | CHD Services ]        |               | Mailing Address: 6121 Indian Scheel Rd                      | bug very ve.  | Phone #: 505    | email or Fax#: Dernard Backisch @ and com Project Manager | QA/QC Package: |  |                                 | _ype)              | Time              |                         | 1410                        | 1430                         | 5180                        | 0480   | 0900                         | 0915                                      | Sepo   | otho                           | 0950                           | 000                             | 1025                           | 1106   | 16 <i>0</i>     |                  | f necessary, samples submitted to Hall Environmental may be subcontracted to other accredit                         |
| 5                       |                       |               | Ng A  | ≥V <i>₫</i> ( | اھ <del>ا</del> | il or F   | C Pa           |  |                                 | □ EDD (Type)       |                   |                         |                             | 1                            |                             |  |                              |   | 8  | ð                              | 0                              | <u></u>                         |                                |  | -               | · · ·            | lf njeo   |
|                         | Client:               |               | Mail  | 211           | Phor            | ema   | OA/G           |  | Z                               |                    | Date              |                         | 6(12)                       | <u>c19</u>                   | 5/13                        | 13   | <u>113</u>                   | ŝ,  | <u>[]</u>  | 213                            |                                | 3                               | 6113                           | <u>(113</u>  | PIL -           | Later Later      |   |
| Rele                    | eased to              | o In          | aginį   |               | /7/20           | )23   | 11:38          | :29  | AM                              |                    |                   |                         |                             |                              | - <b>4</b>                  | 7  | <u> </u>                     | 6   |  | 1.                             | -471                           | -11-1                           | 1                              | - 15   |                 | - <u></u> ,i     |   |

<u>Page 73 of</u> 136



August 01, 2017 Bernie Bockish GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

RE: Livingston 2

OrderNo.: 1707B18

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 13 sample(s) on 7/21/2017 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

| Hall Environ                 | mental Analysis                   | s Laborato  | ory, Inc. |                             | Analytical Report<br>Lab Order: 1707B18<br>Date Reported: 8/1/2 |                               |
|------------------------------|-----------------------------------|-------------|-----------|-----------------------------|---|-------------------------------|
|                              | GHD<br>Livingston 2               |             |           | L                           | ab Order: 1707]   | 318                           |
| Lab ID:<br>Client Sample ID: | 1707B18-001<br>S088210-35-0717171 | MG-SB-1-50' |           | Collection Date:<br>Matrix: | 7/17/2017 4:20:00 Pl<br>SOIL                                    | М                             |
| Analyses                     |                                   | Result      | PQL Qual  | Units                       | DF Date Analyzed  | Batch ID                      |
| EPA METHOD 300<br>Chloride   | 0.0: ANIONS                       | 8300        | 300       | mg/Kg                       | An:<br>200 7/27/2017 5:15:27                                    | alyst: <b>SRM</b><br>PM 33021 |
| Lab ID:<br>Client Sample ID: | 1707B18-002<br>S088210-35-0717171 | MG-SB-1-60' |           | Collection Date:<br>Matrix: | 7/17/2017 5:05:00 Pl<br>SOIL                                    | М                             |
| Analyses                     |                                   | Result      | PQL Qual  | Units                       | DF Date Analyzed  | Batch ID                      |
| EPA METHOD 300<br>Chloride   | 0.0: ANIONS                       | 8300        | 300       | mg/Kg                       | Ana<br>200 7/27/2017 5:27:52                                    | alyst: <b>SRM</b><br>PM 33021 |
| Lab ID:<br>Client Sample ID: | 1707B18-003<br>S088210-35-0717171 | MG-SB-1-70' |           | Collection Date:<br>Matrix: | 7/17/2017 5:50:00 Pl<br>SOIL                                    | М                             |
| Analyses                     |                                   | Result      | PQL Qual  | Units                       | DF Date Analyzed  | Batch ID                      |
| EPA METHOD 300<br>Chloride   | 0.0: ANIONS                       | 13000       | 750       | mg/Kg                       | An:<br>500 7/27/2017 5:40:17                                    | alyst: <b>SRM</b><br>PM 33021 |
| Lab ID:<br>Client Sample ID: | 1707B18-004<br>S088210-35-0718171 | MG-SB-1-80' |           | Collection Date:<br>Matrix: | 7/18/2017 9:10:00 A<br>SOIL                                     | М                             |
| Analyses                     |                                   | Result      | PQL Qual  | Units                       | DF Date Analyzed  | Batch ID                      |
| EPA METHOD 300<br>Chloride   | ).0: ANIONS                       | 11000       | 750       | mg/Kg                       | Ana<br>500 7/27/2017 5:52:42                                    | alyst: <b>SRM</b><br>PM 33021 |
| Lab ID:<br>Client Sample ID: | 1707B18-005<br>S088210-35-0718171 |             |           | Matrix:                     |   |                               |
| Analyses                     |                                   | Result      | PQL Qual  | Units                       | DF Date Analyzed  | Batch ID                      |
| EPA METHOD 300<br>Chloride   | 0.0: ANIONS                       | 3400        | 150       | mg/Kg                       | Ana<br>100 7/27/2017 6:29:56                                    | alyst: <b>SRM</b><br>PM 33021 |

- Qualifiers:
- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environ                             | mental Analys                    | is Laborato                   | ory, Inc. |         | Analytical Report<br>Lab Order: 1707B18<br>Date Reported: 8/1/2017    |
|--|----------------------------------|-------------------------------|-----------|---------|---|
|  | GHD<br>Livingston 2              |                               |           |         | Lab Order: 1707B18  |
| Lab ID:<br>Client Sample ID:             | 1707B18-006<br>S088210-35-071817 | /MG-SB-2-50'                  |           |         | ate: 7/18/2017 2:10:00 PM   |
| Analyses                                 |                                  | Result                        | PQL Qua   | l Units | DF Date Analyzed Batch ID   |
| EPA METHOD 300<br>Chloride               | 0.0: ANIONS                      | 7600                          | 750       | mg/Kg   | Analyst: <b>SRM</b><br>500 7/27/2017 6:42:20 PM 33021                 |
| Lab ID:<br>Client Sample ID:             | 1707B18-007<br>S088210-35-071817 | /MG-SB-2-60'                  |           |         | ate: 7/18/2017 2:55:00 PM<br>trix: SOIL                               |
| Analyses                                 |                                  | Result                        | PQL Qua   | l Units | DF Date Analyzed Batch ID   |
| EPA METHOD 300<br>Chloride               | 0.0: ANIONS                      | 7700                          | 300       | mg/Kg   | Analyst: <b>SRM</b><br>200 7/27/2017 6:54:45 PM 33021                 |
| Lab ID:<br>Client Sample ID:             | 1707B18-008<br>S088210-35-071817 | 7MG-SB-2-70'                  |           |         | ate: 7/18/2017 3:30:00 PM<br>trix: SOIL                               |
| Analyses                                 |                                  | Result                        | PQL Qua   | l Units | DF Date Analyzed Batch ID   |
| EPA METHOD 300<br>Chloride               | 0.0: ANIONS                      | 6200                          | 300       | mg/Kg   | Analyst: SRM<br>200 7/27/2017 7:07:10 PM 33021                        |
| Lab ID:<br>Client Sample ID:             | 1707B18-009<br>S088210-35-071817 | 7MG-SB-2-75'                  |           |         | ate: 7/18/2017 4:15:00 PM<br>trix: SOIL                               |
| Analyses                                 |                                  | Result                        | PQL Qua   | l Units | DF Date Analyzed Batch ID   |
| EPA METHOD 300<br>Chloride               | 0.0: ANIONS                      | 980                           | 30        | mg/Kg   | Analyst: MRA<br>20 7/26/2017 4:12:52 PM 33021                         |
| Lab ID:<br>Client Sample ID:<br>Analyses | 1707B18-010<br>S088210-35-071917 | /MG-SB-3-50'<br><b>Result</b> | PQL Qua   | Mat     | ate: 7/19/2017 11:15:00 AM<br>trix: SOIL<br>DF Date Analyzed Batch ID |
| EPA METHOD 300<br>Chloride               | 0.0: ANIONS                      | 62                            | 30        | mg/Kg   | Analyst: <b>MRA</b><br>20 7/26/2017 4:25:17 PM 33021                  |

- Qualifiers:
- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environ                  | mental Analysis                   | Laborato                     | ory, Inc. |       | Analytical Report<br>Lab Order: 1707B18<br>Date Reported: 8/1/2017 |
|-------------------------------|-----------------------------------|------------------------------|-----------|-------|--|
|                               | GHD<br>Livingston 2               |                              |           |       | <b>Lab Order:</b> 1707B18  |
| Lab ID:<br>Client Sample ID:  | 1707B18-011<br>S088210-35-071917M | 1G-SB-3-60'                  | (         |       | nte: 7/19/2017 11:45:00 AM<br>rix: SOIL                            |
| Analyses                      |                                   | Result                       | PQL Qual  | Units | DF Date Analyzed Batch ID  |
| EPA METHOD 300<br>Chloride    | 0.0: ANIONS                       | 88                           | 30        | mg/Kg | Analyst: <b>MRA</b><br>20 7/26/2017 4:37:42 PM 33021               |
| Lab ID:                       | 1707B18-012                       |                              | (         |       | nte: 7/19/2017 3:05:00 PM  |
| Client Sample ID:<br>Analyses | S088210-35-071917N                | 1G-SB-4-40'<br><b>Result</b> | PQL Qual  |       | rix: SOIL DF Date Analyzed Batch ID                                |
| EPA METHOD 300                | 0.0: ANIONS                       |                              |           |       | Analyst: MRA   |
| Chloride                      |                                   | 870                          | 30        | mg/Kg | 20 7/26/2017 4:50:07 PM 33021                                      |
| Lab ID:<br>Client Sample ID:  | 1707B18-013<br>S088210-35-071917N | 1G-SB-4-50'                  | (         |       | nte: 7/19/2017 3:35:00 PM  |
| Analyses                      |                                   | Result                       | PQL Qual  | Units | DF Date Analyzed Batch ID  |
| EPA METHOD 300                | 0.0: ANIONS                       |                              |           |       | Analyst: MRA   |
| Chloride                      |                                   | 79                           | 30        | mg/Kg | 20 7/26/2017 5:02:32 PM 33021                                      |

**Qualifiers:** 

- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- The filles for preparation of analysis excee
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Client:<br>Project: | GHD<br>Livings | ston 2             |           |             |                    |         |              |      |          |      |
|---------------------|----------------|--------------------|-----------|-------------|--------------------|---------|--------------|------|----------|------|
| Sample ID           | MB-33021       | SampType: <b>M</b> | BLK       | Tes         | tCode: EPA I       | Method  | 300.0: Anion | s    |          |      |
| Client ID:          | PBS            | Batch ID: 33       | 8021      | R           | RunNo: <b>4452</b> | 3       |              |      |          |      |
| Prep Date:          | 7/26/2017      | Analysis Date: 7   | /26/2017  | S           | eqNo: 1407         | 865     | Units: mg/K  | g    |          |      |
| Analyte             |                | Result PQL         | SPK value | SPK Ref Val | %REC Lo            | owLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Chloride            |                | ND 1.5             |           |             |                    |         |              |      |          |      |
| Sample ID           | LCS-33021      | SampType: L        | cs        | Tes         | tCode: EPA I       | Method  | 300.0: Anion | s    |          |      |
| Client ID:          | LCSS           | Batch ID: 33       | 8021      | R           | RunNo: 4452        | 3       |              |      |          |      |
| Prep Date:          | 7/26/2017      | Analysis Date: 7   | /26/2017  | S           | eqNo: 1407         | 866     | Units: mg/K  | g    |          |      |
| Analyte             |                | Result PQL         | SPK value | SPK Ref Val | %REC Lo            | owLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Chloride            |                | 14 1.5             | 15.00     | 0           | 90.9               | 90      | 110          |      |          |      |

#### **Qualifiers:**

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

Page 4 of 4

WO#: **1707B18** *01-Aug-17* 

| HALL<br>ENVIRONMENTAL<br>ANALYSIS<br>LABORATORY   | Hall Environmental A<br>Albuq<br>TEL: 505-345-3975 F<br>Website: www.hall | 4901 Hawkins NI<br>querque, NM 8710<br>7AX: 505-345-410 | Samp              | le Log-In Che                     | Page 7.<br>ck List      |
|---|---|---|-------------------|-----------------------------------|-------------------------|
| Client Name: GHD  | Work Order Number:  | 1707B18   |                   | RcptNo: 1                         |                         |
| Received By: Sophia Campuzano   | 7/21/2017 9:45:00 AM  |   | Sopher Compr-     |                                   |                         |
| Completed By: Erin Melendrez  | 7/21/2017 10:32:15 AM   | l   | Sophu Com-<br>LUC |                                   |                         |
| Reviewed By:  | 7/21/17   |   |                   |                                   |                         |
| 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?  |   | <u>Courier</u>  |                   |                                   |                         |
| Log In  |   |   |                   |                                   |                         |
| 4. Was an attempt made to cool the samp   | es?   | Yes 🗹   | No 🗌              | NA 🗌                              |                         |
| 5. Were all samples received at a tempera   | ture of >0° C to 6.0°C  | Yes 🗹   | No 🗌              |                                   |                         |
| 6. Sample(s) in proper container(s)?  |   | Yes 🗹   | No 🗌              |                                   |                         |
| 7. Sufficient sample volume for indicated te  | est(s)?   | Yes 🗹   | No 🗌              |                                   |                         |
| 8, Are samples (except VOA and ONG) pro   | 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 b   | roken?  | Yes 📙   | No 🗹 🃋            | # of preserved<br>bottles checked |                         |
| 12.Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody         | )   | Yes 🔽   | No 🗌              | for pH:                           | 2 unless noted)         |
| 13. Are matrices correctly identified on Chai   |   | Yes 🗹   | No 🗌              | Adjusted?                         | · · · · · · · · · · · · |
| 14. Is it clear what analyses were requested  |   | Yes 🗹   | No 🗌              |                                   |                         |
| 15. Were all holding times able to be met?<br>(If no, notify customer for authorization.) |   | Yes 🔽   | No 🗌              | Checked by:                       |                         |
| Special Han <u>dling (if applicable)</u>  |   |   |                   |                                   |                         |
| 16. Was client notified of all discrepancies w  | vith this order?  | Yes   | No 🗌              | NA 🔽                              |                         |

| Person Notified:    | Date:    |                                |
|---------------------|----------|--------------------------------|
| By Whom:            |          | Mail 🔲 Phone 🗌 Fax 📋 In Person |
| Regarding:          |          |                                |
| Client Instructions | <b>X</b> |                                |

.

17. Additional remarks:

#### 18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 2.4     | Good      | Yes         |         |           |           |

Page 1 of 1

| IALL ENVIRONMENTAL<br>NALYSIS LABORATORY<br>www.hallenvironmental.com | - Albuquerque, NM 87109<br>Fax 505-345-4107<br>Analysis Request | S                                  | C)<br>S bCB.                  | (3082)<br>(3082)<br>(1)<br>(8082) | esebi<br>۱۹۰۱<br>۱۹۰۷         | Anions (F, C<br>8208 (YOA<br>8270 (Semi<br>どつつして)  | X                                | X                         | X                              | X                           | X                              | X                        | X                            | X                            | X                          | ×                           | X                             | X                         | Tug   | e 80 0j       |
|---|---|------------------------------------|-------------------------------|-----------------------------------|-------------------------------|--|----------------------------------|---------------------------|--------------------------------|-----------------------------|--------------------------------|--------------------------|------------------------------|------------------------------|----------------------------|-----------------------------|-------------------------------|---------------------------|---|---------------|
|   | 4901 Hawkins NE - Alt<br>Tel. 505-345-3975 F<br>Analy           | (Kjuc                              | 0 S6D)<br>M \ OF              | H TPH<br>(1.81)<br>(1.41)         | 0 ot<br>09 9(<br>04 4.<br>(GF | BTEX + MT<br>BTEX + MT<br>TPH (Metho<br>EDB (Metho<br>EDB (Metho<br>(8310<br>PAH's (8310 |                                  |                           |                                |                             |                                |                          |                              |                              |                            |                             |                               |                           | Remarks:  |               |
| D Turn-Around Time:<br>XStandard □ Rush<br>Project Name:              | et#.<br>\$\$210-35  | ct Manager:                        | Benerk Bockisch               | oler Michael Cant<br>e: XYes DNO  | Temperature: 2.4              | Container<br>Type and # Type Type  | Sulfer Ice -mi                   | -002                      | -003                           | -004                        | -005                           | -006                     | -067                         | -008                         | 600-                       | -010-                       | -011                          | -012                      | L Date Time<br>Date Time                        | TI/12/10 - CE |
| dy Record   | 011/2 W/ 2/110  | Backischer and com Project Manager | Level 4 (Full Validation) Be( | C On Ice:                         | Samp                          | Sample Request ID Con  | 505821 0-36-0717. M6-58-1-50 402 | 09-1-85-0117170-55-015505 | 02-1-92-07177-07170-55-07-50-5 | 08-1-85-01812-86-98-58-9-50 | 03-1-95-374-118120-58-912820.5 | 5-03540 Drong17-46-58250 | 2-088210-35-07817-46-58-2-60 | 02-2-2-32-211870-25-211030-2 | STO SYCIESS ONSIT MESSARTS | 5038210-35-011917-N6-38-320 | 5-0982,406-35-01117465.883-60 | 04495-91×1111102-55-01~81 | of by:<br>Cut A<br>Received by<br>Received by   | L             |
| Client: CHD Services  | NE Albuquergu<br>Phone #: 5 05 884                              |                                    | 5:85:<br>Standard             | DISCREDITION CHER                 | EDD (Type)                    | Date Time Matrix   | 7/17 1620 5                      | 2/17/105 S                | 2117 1750 S                    | 7/18 0910 5                 | 7118 1005 5                    | 2/18/14/05               | I455 S                       | 7/18 15305                   | 7/18 16155                 |                             | 7/19/1145 5                   | 555                       | Date: Time: Relinquished by:<br>7/2.6 0800 Kerr | 1 400 X       |

Page 80 of, 136

Received by OCD: 6/8/2023 10:02:48 AM

|                   | ANALYSIS LABORATORY           | i<br>U        | 37109  | Eax 505-345-4107 | Analysis Request        | ()()<br>()()<br>()()<br>()()<br>()()<br>()()<br>()()<br>()( | O / MF<br>(SM<br>(SM | )<br>10 <sup>5</sup> 1<br>10 <sup>5</sup> 1<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | 4 TI<br>30,<br>18,<br>18,<br>18,<br>18,<br>18,<br>18,<br>18,<br>18,<br>18,<br>18 |                         | TM + X3T8<br>BTEX + MT<br>BTEX + MT<br>BTEX + Method<br>B2F08 (Method<br>B2F08 (Method<br>B2F08 (VOA<br>B2F08 | X  |  |  |  |  | Remarks:              | 0       | _10   | s possibility. Any sub-contracted data will be clearly notated on the analytical report.                                   |
|-------------------|-------------------------------|---------------|--|------------------|-------------------------|---|----------------------|---|--|-------------------------|---|--|--|--|--|--|-----------------------|---------|---|--|
| Turn-Around Time: | K Standard 🗆 Rush             | Project Name: | Livingston 2                                   | Project #:       | 088210-35               | Project Manager:  | Bernard Bock 1sch    | sampler. Michael Cant   | X Yes  | Sample Temperature: 2.4 | Container Preservative HEAL No.<br>Type and # Type  TATR 18   | - 37-  |  |  |  |  | Ē                     |         | Received by: "Date Time<br>STPL CAP D7/21/17 0944 | ed to Hail Environmental may be subcontracted to other accredited laboratorias. This serves as notice of this possibility. |
| ord               | open Client GHD Scrices, Inc. | - Im          | Mailing Address: (21 Indian School Red Ste 200 |                  | 2 Phone #: 505 884 0672 | cische and com  | -                    |   | NELAP     Other  | EDD (Type)              | Date Time Matrix Sample Request ID  | 7/19 1635 5 5-058240-35-01917-46-58-450 for Soil Jac |  |  |  |  | Time: Relinquished by | And the | bate: Time: Relinguished by:                      | samples ubmit  |

Received by OCD: 6/8/2023 10:02:48 AM

Page 81 of 136



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

September 01, 2017 Alan Brandon GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: Livingston Ridge SWD No 2

OrderNo.: 1708C84

Dear Alan Brandon:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/22/2017 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

| Hall Environ                  | mental Analysis                     | Laborato                     | ry, Inc. |                             | Analytical Report<br>Lab Order: 1708C84<br>Date Reported: 9/1/2017 |  |  |  |  |  |  |
|-------------------------------|-------------------------------------|------------------------------|----------|-----------------------------|--|--|--|--|--|--|--|
|                               | GHD<br>.ivingston Ridge SWD N       | lo 2                         |          | L                           | ab Order: 1708C84  |  |  |  |  |  |  |
| Lab ID:<br>Client Sample ID:  | 1708C84-001<br>S-088210-35-081817-5 | SP-SB-5-100                  | (        | Collection Date:<br>Matrix: | : 8/18/2017 10:53:00 AM<br>: SOIL                                  |  |  |  |  |  |  |
| Analyses                      |                                     | Result                       | PQL Qual | Units                       | DF Date Analyzed Batch ID  |  |  |  |  |  |  |
| EPA METHOD 300<br>Chloride    | .0: ANIONS                          | 48                           | 30       | mg/Kg                       | Analyst: <b>MRA</b><br>20 8/28/2017 6:01:52 PM 33585               |  |  |  |  |  |  |
| Lab ID:                       | 1708C84-002                         |                              | (        |                             | : 8/18/2017 11:40:00 AM  |  |  |  |  |  |  |
| Client Sample ID:<br>Analyses | S-088210-35-081817-S                | SP-SB-5-110<br><b>Result</b> | PQL Qual | Matrix:<br>Units            | : SOIL<br>DF Date Analyzed Batch ID                                |  |  |  |  |  |  |
| EPA METHOD 300<br>Chloride    | .0: ANIONS                          | 760                          | 30       | mg/Kg                       | Analyst: <b>MRA</b><br>20 8/28/2017 6:14:16 PM 33585               |  |  |  |  |  |  |
| Lab ID:<br>Client Sample ID:  | 1708C84-003<br>S-088210-35-081817-5 | SP-SB-5-120                  |          | Collection Date:<br>Matrix: | : 8/18/2017 12:22:00 PM<br>: SOIL                                  |  |  |  |  |  |  |
| Analyses                      |                                     | Result                       | PQL Qual | Units                       | DF Date Analyzed Batch ID  |  |  |  |  |  |  |
| EPA METHOD 300<br>Chloride    | .0: ANIONS                          | 82                           | 30       | mg/Kg                       | Analyst: <b>MRA</b><br>20 8/28/2017 6:26:40 PM 33585               |  |  |  |  |  |  |

**Qualifiers:** 

- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- Holding times for properation or analysis
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Ľ                   |               | tal Analysis Laborat     | ory, Inc.                                | WO#:     | 1708C84<br>01-Sep-17 |
|---------------------|---------------|--------------------------|--|----------|----------------------|
| Client:<br>Project: | GHD<br>Living | gston Ridge SWD No 2     |  |          |                      |
| Sample ID           | MB-33585      | SampType: <b>mblk</b>    | TestCode: EPA Method 300.0: Anions       |          |                      |
| Client ID:          | PBS           | Batch ID: 33585          | RunNo: <b>45254</b>                      |          |                      |
| Prep Date:          | 8/28/2017     | Analysis Date: 8/28/2017 | SeqNo: 1434156 Units: mg/Kg              |          |                      |
| Analyte             |               | Result PQL SPK value     | SPK Ref Val %REC LowLimit HighLimit %RPD | RPDLimit | Qual                 |

| Chloride             | ND             | 1.5          |             |           |           |              |      |          |      |
|----------------------|----------------|--------------|-------------|-----------|-----------|--------------|------|----------|------|
| Sample ID LCS-33585  | SampType       | : Ics        | Tes         | tCode: EF | PA Method | 300.0: Anion | s    |          |      |
| Client ID: LCSS      | Batch ID:      | 33585        | F           | RunNo: 45 | 5254      |              |      |          |      |
| Prep Date: 8/28/2017 | Analysis Date: | 8/28/2017    | S           | SeqNo: 14 | 434157    | Units: mg/K  | (g   |          |      |
| Analyte              | Result P       | QL SPK value | SPK Ref Val | %REC      | LowLimit  | HighLimit    | %RPD | RPDLimit | Qual |
| Chloride             | 14             | 1.5 15.00    | 0           | 90.3      | 90        | 110          |      |          |      |

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

Page 2 of 2

| Th.   | 0.0 |    | 0 4  | 20  |
|-------|-----|----|------|-----|
| Page  | 85  | 01 | t I: | 50  |
| - "a- | ~~  | ~  |      | · • |

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| ANAL                   | RONMENTAL<br>YSIS<br>RATORY                              | Hall Environmental<br>Albı.<br>TEL: 505-345-3975<br>Website: www.ha | 4901 Hawkin<br>Iquerque, NM 8<br>FAX: 505-345- | ns NE<br>87109 Sam<br>4107 | Sample Log-In Check List          |                 |  |  |  |  |
|------------------------|--|---|--|----------------------------|-----------------------------------|-----------------|--|--|--|--|
| Client Name:           | GHD  | Work Order Number:  | 1708C84  |                            | RcptNo: 1                         |                 |  |  |  |  |
| Received By:           | Isaiah Ortiz   | 8/22/2017 8:57:00 AM  |  | I Color<br>Minus Co        | -                                 |                 |  |  |  |  |
| Completed By:          | Michelle Garcia  | 8/22/2017 4:08:36 PM  |  | minul Co                   | rue)                              |                 |  |  |  |  |
| Reviewed By:           | INO  | 8/23/2017   |  | . ,                        |                                   |                 |  |  |  |  |
| C <u>hain of Cus</u>   | tody   |   |  |                            |                                   |                 |  |  |  |  |
| 1. Custody sea         | ils intact on sample bottles                             | ?   | Yes 🗋  | No 🗌                       | Not Present 🗹                     |                 |  |  |  |  |
| 2. Is Chain of C       | Custody complete?  |   | Yes 🗹  | No 🗌                       | Not Present                       |                 |  |  |  |  |
| 3. How was the         | e sample delivered?                                      |   | <u>FedEx</u>                                   |                            |                                   |                 |  |  |  |  |
| <u>Log In</u>          |  |   |  |                            | _                                 |                 |  |  |  |  |
| 4. Was an atte         | mpt made to cool the sam                                 | nples?  | Yes 🗹  | No 🗌                       | NA                                |                 |  |  |  |  |
| 5. Were all sar        | nples received at a tempe                                | rature of >0° C to 6.0°C  | Yes 🗹  | No 🗌                       |                                   |                 |  |  |  |  |
| 6. Sample(s) ii        | n proper container(s)?                                   |   | Yes 🗹  | Νο                         |                                   |                 |  |  |  |  |
| 7. Sufficient sa       | mple volume for indicated                                | test(s)?  | Yes 🔽  | No 🗌                       |                                   |                 |  |  |  |  |
| 8. Are samples         | (except VOA and ONG) p                                   | properly preserved?   | Yes 🗹  | No 🗌                       |                                   |                 |  |  |  |  |
| 9. Was preserv         | ative added to bottles?                                  |   | Yes 🗌  | No 🗹                       | NA 🗌                              |                 |  |  |  |  |
| 10.VOA vials ha        | ave zero headspace?                                      |   | Yes  | No 🗌                       | No VOA Vials 🗹                    |                 |  |  |  |  |
| 11. Were any sa        | ample containers received                                | broken?   | Yes 🗖  | No 🗹                       | # of preserved<br>bottles checked |                 |  |  |  |  |
|                        | vork match bottle labels?<br>pancies on chain of custod  | iy)   | Yes 🗹  | Νο                         | for pH:                           | 12 unless noted |  |  |  |  |
| 13. Are matrices       | correctly identified on Cha                              | ain of Custody?   | Yes 🔽  | No 🗌                       | Adjusted?                         |                 |  |  |  |  |
| 14, Is it clear wh     | at analyses were requeste                                | ed?   | Yes 🖌  | No 🗌                       |                                   |                 |  |  |  |  |
|                        | ding times able to be met?<br>customer for authorization |   | Yes 🗹  | No                         | Checked by:                       |                 |  |  |  |  |
| <u>Special Hand</u>    | ling (if applicable)                                     |   |  |                            |                                   |                 |  |  |  |  |
|                        | otified of all discrepancies                             | with this order?  | Yes  | No 🗔                       |                                   |                 |  |  |  |  |
| Person                 | Notified:  | Date 「  |  |                            |                                   |                 |  |  |  |  |
| By Wh                  | om:  | Via: [  | eMail 🗌  | Phone 🗌 Fax                | 📋 In Person                       |                 |  |  |  |  |
| Regard                 | -  |   |  |                            |                                   |                 |  |  |  |  |
| Client                 | nstructions:   |   |  |                            |                                   |                 |  |  |  |  |
| 17. Additional re      | emarks:  |   |  |                            |                                   |                 |  |  |  |  |
| 18. <u>Cooler Info</u> |  | 1 1 2   |  |                            |                                   |                 |  |  |  |  |
| Cooler No              |  |   | Seal Date                                      | Signed By                  |                                   |                 |  |  |  |  |
| 1 <sup>1</sup>         | 0.1 Good   | Not Present   |  |                            |                                   |                 |  |  |  |  |

| Receive           | ed by             | 00                        | C <b>D:</b> 6                            | 6/8/2                              | 023                   | 10:0                 | 02:48        | AM  | (N )                                     | юλ                                 | .) se  | əlddu8 riA   |  | I   | 1             | İ.       | I | ļ    | I | I | 1 |   | Pa                        | ige 86 oj                    | f 136   |
|-------------------|-------------------|---------------------------|--|------------------------------------|-----------------------|----------------------|--------------|-----|--|------------------------------------|--|--|--|-----|---------------|----------|---|------|---|---|---|---|---------------------------|------------------------------|---|
| JAL               | JRΥ               |                           |  |                                    | 14 ( + + +            |                      |              |     |  |                                    |  |  |  |     |               |          |   | <br> |   |   |   |   |                           |                              | ų.  |
|                   |                   | www.hallenvironmental.com | 4901 Hawkins NE - Albuquerque, NM 87109  | Tel. 505-345-3975 Fax 505-345-4107 | Analysis Request      | ()<br>()<br>()<br>() | ) / WI       |     | / 0 /<br>327(<br>3, N(<br>527(<br>7, 80) | ا 68<br>ا 90<br>ا 20<br>ا 20<br>68 | bod<br>hod<br>1,10,<br>1,10,<br>1,10,<br>1,0,1 | 81EX + М<br>1PH 8015<br>TPH (Met<br>1PH (Met<br>1PH's (83<br>RCRA 8 N<br>8260B (V<br>8260B (V)<br>8260B (V<br>8260B (V)<br>8260B (V<br>8260B (V)<br>8260B (V<br>8260B (V)<br>8260B (V)<br>8260B (V<br>8260B (V)<br>8260B |  |     |               |          |   |      |   |   |   |   | Remarks:                  |                              | This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report |
|                   |                   |                           |  |                                    |                       | ()                   | 208)         | s'8 | NT<br>NT                                 | + ∃<br>                            | I<br>BTR                                       | BTEX + N   |  |     |               | <u> </u> |   |      |   | _ |   |   | _                         |                              | this possi  |
|                   | C Rush            |                           | Ridge SWD No. 2                          | l                                  | (                     |                      | c            |     | rere-                                    | <u>ן</u> ב                         |  | HEAL No.   |  | 209 | 200           |          |   |      |   |   |   |   | Date Time<br>8 22 17 8:57 | Date Time                    |   |
| me:               |                   |                           |  |                                    | io/",                 | e                    | snde         |     | N P ve                                   | roturo.                            |  | Preservative<br>Type   | Н<br>И   |     | $\rightarrow$ |          |   |      |   |   |   |   |                           |                              | edited lab  |
| Turn-Around Time: | V Standard        | Project Name:             | Livings ton                              | Project #:                         | ( <b>6.</b> /01788N   | Project Manage       | Alan Drandon |     | Sampler: M                               | Sample Temps                       |  | Container F  |  |     | >             |          |   |      |   |   |   |   | Received by:              | Received by:                 | ntracted to other acc   |
| Record            | (JHJ)-Albuquerque |                           | Mailing Address 6/21 Julien School Bd NE |                                    | Phone #: 505-584.0672 | COM                  | ige:         |     | □ Other                                  |                                    |  | Date Time Matrix Sample Request ID   | 8-18-17/115-3 Soil Spaze 35-0881258-5-100 402 a lass-1 | 071 |               |          |   |      |   |   |   | ( | 1715.50 MWAN MAN          | patel Time: Relinquished by: | If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories.        |

Released to Imaging: 7/7/2023 11:38:29 AM

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

August 28, 2017

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

RE: Livington Ridge SWD No 2

OrderNo.: 1708B40

Dear Alan Brandon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/18/2017 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<br>Lab Order: 1708B40 |        |
|-------------------|------------------------------|--------------|-----------|--------------|---|--------|
| Hall Environ      | mental Analysis              | s Laborato   | ory, Inc. |              | Date Reported: 8/28/2017                | 1      |
|                   | GHD<br>.ivington Ridge SWD N | Jo 2         |           |              | <b>Lab Order:</b> 1708B40               |        |
| Lab ID:           | 1708B40-001                  |              |           | Collection I | Date: 8/16/2017 11:41:00 AM             |        |
| Client Sample ID: | S-088210-35-081617           | -SP-SB-6-85' |           | Ma           | trix: SOIL                              |        |
| Analyses          |                              | Result       | PQL Qual  | Units        | DF Date Analyzed Ba                     | tch ID |
| EPA METHOD 300    | 0.0: ANIONS                  |              |           |              | Analyst:                                | MRA    |
| Chloride          |                              | ND           | 30        | mg/Kg        | 20 8/26/2017 12:09:13 AM                | 33563  |
| Lab ID:           | 1708B40-002                  |              |           | Collection I | Date: 8/16/2017 11:44:00 AM             |        |
| Client Sample ID: | S-088210-35-081617           | -SP-SB-6-95' |           | Ma           | trix: SOIL                              |        |
| Analyses          |                              | Result       | PQL Qual  | Units        | DF Date Analyzed Ba                     | tch ID |
| EPA METHOD 300    | .0: ANIONS                   |              |           |              | Analyst:                                | MRA    |
| Chloride          |                              | ND           | 30        | mg/Kg        | 20 8/26/2017 12:21:37 AM                | 33563  |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| e                   | Hall Environmental Analysis Laboratory, Inc. |  |  |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|--|--|
| Client:<br>Project: | GHD<br>Livington Ridge SWD No 2              |  |  |  |  |  |  |  |

| Sample ID MB-33563                     | SampType: <b>mblk</b><br>Batch ID: <b>33563</b>           | TestCode: EPA Method<br>RunNo: 45224 | 300.0: Anions                 |               |
|--|---|--------------------------------------|-------------------------------|---------------|
| Prep Date: 8/25/2017                   | Analysis Date: 8/25/2017                                  | SegNo: 1433002                       | Units: <b>mg/Kg</b>           |               |
|  | ,   | ·                                    |                               |               |
| Analyte                                | Result PQL SPK value                                      | SPK Ref Val %REC LowLimit            | HighLimit %RPD                | RPDLimit Qual |
| Chloride                               | ND 1.5  |                                      |                               |               |
|  |   |                                      |                               |               |
| Sample ID LCS-33563                    | SampType: Ics   | TestCode: EPA Method                 | 300.0: Anions                 |               |
| Sample ID LCS-33563<br>Client ID: LCSS | SampType: Ics<br>Batch ID: 33563                          | TestCode: EPA Method<br>RunNo: 45224 | 300.0: Anions                 |               |
| •                                      |   |                                      | 300.0: Anions<br>Units: mg/Kg |               |
| Client ID: LCSS                        | Batch ID: <b>33563</b><br>Analysis Date: <b>8/25/2017</b> | RunNo: <b>45224</b>                  |                               | RPDLimit Qual |

#### **Qualifiers:**

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

Page 2 of 2

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| ENVIRONMENTAL<br>ANALYSIS<br>LABORATORY   | Albu<br>TEL: 505-345-3975 J<br>Website: www.hal |           | 7109 Sam<br>4107 | ple Log-In C                          | heck List           |
|---|---|-----------|------------------|---------------------------------------|---------------------|
| Client Name: GHD  | Work Order Number:                              | 1708B40   |                  | RcptNo:                               | 1                   |
| Received By: Sophia Campuzano   | 8/18/2017 9:15:00 AM                            |           | Sophie Carper-   | -                                     |                     |
| Completed By: Ashley Gallegos   | 8/18/2017 11:28:06 AM                           | l         | AZ               |                                       |                     |
| Reviewed By: SRR. 08/18/1   | 7   |           | V                |                                       |                     |
| Chain of Custody  |   |           |                  |                                       |                     |
| 1. Custody seals intact on sample bottles?  |   | Yes 🗌     | No 🗔             | Not Present 🗹                         |                     |
| 2. Is Chain of Custody complete?  |   | Yes 🗹     | No 🗌             | Not Present                           |                     |
| 3. How was the sample delivered?  |   | Courier   |                  |                                       |                     |
| <u>Log In</u>   |   |           |                  |                                       |                     |
| 4. Was an attempt made to cool the 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) proper  | ly 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   | en?   | Yes ∐     | No 🗹             | # of preserved<br>bottles checked     |                     |
| 12. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)       |   | Yes 🗹     | No 🗌             | for pH:<br>(<2                        | or >12 unless 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?<br>(If no, notify customer for authorization.) |   | Yes 🗹     | No 🗀             | Checked by:                           |                     |
| Special Handling (if applicable)  |   |           |                  |                                       |                     |
| 16. Was client notified of all discrepancies with   | his order?                                      | Yes 🗌     | No 🗌             | NA 🗹                                  |                     |
| Person Notified:  | Date  |           |                  |                                       |                     |
| By Whom:  | Via: [  | eMail 📋   | Phone 🗌 Fax      | 🔲 In Person                           |                     |
| Regarding:  |   |           |                  |                                       |                     |
| Client Instructions:  |   |           |                  | · · · · · · · · · · · · · · · · · · · |                     |
| 17. Additional remarks:   |   |           |                  |                                       |                     |
| 18. <u>Cooler Information</u>   | anna loann lo                                   |           | 0:               | I                                     |                     |
|   | eal Intact Seal No S<br>Present                 | Seal Date | Signed By        |                                       |                     |
|   |   |           |                  | I                                     |                     |

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| IV.           | NRV<br>NRV          |                           |                           |            |                         |       |                                  |                           | (N -                          | 0,    | () s             | elddu8 ifA              |                               |                             |   |   |   |   |   |           |   | _                |          |               |
|---------------|---------------------|---------------------------|---------------------------|------------|-------------------------|-------|----------------------------------|---------------------------|-------------------------------|-------|------------------|-------------------------|-------------------------------|-----------------------------|---|---|---|---|---|-----------|---|------------------|----------|---------------|
| ENVTDONMENTAL | ANALYSTS LABORATORY |                           | Albuquerque, NM 87109     |            | 07                      |       | 0.0                              | 104                       | 27                            | n n   | : ]              | 10147                   | ×                             | ×                           |   |   |   |   |   |           | + |                  |          |               |
| 20            |                     | www.hallenvironmental.com | NNN S                     | -          | 505-345-4107<br>Reduest | -     |                                  | _                         | 0                             | 40    | 1                | OV) 80828<br>me2) 0728  | _                             | -                           | + | + | + | + | + |           | - | -                |          |               |
| 0             |                     | l date                    | due.                      |            | 505-345-<br>Request     |       | s,80                             | )d a                      | 2808 /                        | Se    | 0.000            | itse9 1808              |                               | -                           | + | + | + | + | + |           | + |                  |          |               |
|               | Ľ                   |                           | International             | - 1        |                         |       | (*OS'*(                          | ЪС                        | <sup>2</sup> ON' <sup>E</sup> | ON    | 1'10             | ), A) anoinA            |                               |                             | + |   | 1 |   |   |           | + |                  |          |               |
| ū             | i Ş                 |                           | Albu                      |            | Analvsis                |       |                                  |                           |                               | S     | etə              | М 8 АЯЭЯ                |                               |                             |   |   |   |   |   |           |   |                  |          |               |
|               |                     | d d                       | - EN                      |            | 975                     | 1     | (S                               | MIS                       |                               | _     |                  | rc8) a'HA9              |                               |                             |   |   |   |   |   |           |   | _                |          |               |
|               |                     |                           | kins                      | 1          | 345-3                   |       |                                  |                           |                               | -     | · · · ·          | HI9M) 803               |                               |                             | _ |   |   | _ |   |           | _ |                  |          |               |
|               |                     |                           | 4901 Hawkins NE           | 1          | Tel. 505-345-3975       | 7     | 0.1141./                         | ~                         | 132.00.000                    |       | <u></u>          | HTPH (Meth              |                               |                             | + | + | + | + | - |           | - | _                |          |               |
|               |                     |                           | 1901                      |            | Tel.                    |       | No. Contraction of the           |                           |                               |       |                  | BTEX + M1               | _                             | _                           | + | + | + | + | + |           | + | -iz              |          |               |
|               | Π                   |                           | 2                         |            |                         | Ì     |                                  |                           |                               |       | _                | TM + X3T8               | -                             | -                           | + | + | + | + | + |           | + | Remarks:         |          |               |
|               | -                   |                           |                           | Г          | - 12                    |       | 11.5.5.5                         |                           | 1                             | T     |                  | 0                       |                               |                             | + |   | + | + | + |           | + | -                | 3        | N             |
|               |                     |                           | Linnyston Ridge SWD No. 2 |            |                         |       | Non                              |                           | Rez No                        |       |                  | HEAL No.<br>[7]08/B41   | - 001                         | -002                        |   |   |   |   |   |           |   | Date Time        | 17       | OB/18/17 OGIS |
|               | C Rush              |                           | yston Ridy                |            | 088210/35               |       | Manager.<br>Plan Branlon         | 5                         | STOJE R                       | × 100 | emperature: (, U | Preservative<br>Type    | 十(正                           | 7                           |   |   |   |   |   |           |   |                  | 1        | 0 ~~~         |
|               | Standard            | Project Name:             | Lum                       | Project #: | 080                     |       | Project Manager.<br>P. I.c. A    | 10                        | Sampler:                      | 11    | sample rem       | Container<br>Type and # | 1-2- 4 20h                    | 3                           |   |   |   |   |   |           |   | Received by:     | Recently | Super.        |
| •             | . gv                |                           | Chool Rd NE               |            | NM 8710                 |       | on Q ghd. (0m                    | Level 4 (Full Validation) |                               |       |                  | Sample Request ID       | 5087210-35-081617.58-586 - 85 | 、56-7-4~45-2月180-32-00280-3 |   |   |   |   |   |           |   | 1                | they     |               |
|               | Albusine Caro       |                           | Mailing Address: 6/2/17   |            | Abuquerque A            | 07-10 | Gn. Brandon                      |                           | Other                         |       |                  | Matrix S;               |                               | C0805                       | _ | + | + | - | + |           |   | Relinquished by: | - ANT    | You           |
|               | AIS                 |                           | 19:                       |            | North                   | 0-0   | Alc                              |                           |                               |       |                  | Ma                      | Š                             | $\rightarrow$               |   |   |   |   |   | $\square$ | _ | Relin            | Y Self   | A             |
|               | × .                 |                           | Address                   | N COC      |                         | #. 21 | email or Fax#:<br>QA/QC Package: | ndard                     | Accreditation                 | ł     |                  | Time                    | 11:41                         | 11:49                       |   |   |   |   |   |           |   | Time.            |          | 8/n/n 1240    |
|               | Client:             |                           | Mailing                   | 10         | Dhone #:                | LINIE | QA/QC                            | Standard                  | Accreditati                   |       |                  | Date                    | 8-16-17                       | 7                           |   |   |   |   |   |           |   | Date:            | N.       | 4/0/          |

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Received by OCD: 6/8/2023 10:02:48 AM

# Appendix C Boring Logs

Laboratory Analytical Report

Released to Imaging: 7/7/2023 11:38:29 AM

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Page 1 of 2

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-1 DATE COMPLETED: July 17, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: M. GANT

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS                           | DEPTH<br>ft BGS | BOREHOLE   | ~       |          | SAM     |           |          |
|-----------------|---|-----------------|--|---------|----------|---------|-----------|----------|
|                 |   |                 |  | NUMBER  | INTERVAL | REC (%) | 'N' VALUE | Chloride |
| 2 4 6 8         | SC-CLAYEY SAND, fine grained, well sorted, reddish brown, dry |                 |  |         |          |         |           |          |
| - 10<br>- 12    | - light brown at 10.0ft BGS                                   |                 |  |         |          |         |           |          |
| · 14<br>· 16    | - light reddish brown at 15.0ft BGS                           |                 |  |         |          |         |           |          |
| - 18            |   |                 |  |         |          |         |           |          |
| 20<br>22        | - very fine grained, brown at 20.0ft BGS                      |                 |  | SB-1-20 |          |         |           |          |
| 24              |   | 25.00           |  | SB-1-25 |          |         |           |          |
| 26<br>28        | SM-SILTY SAND, very fine grained, well sorted, brown, dry     | 25.00           |  | 58-1-25 |          |         |           |          |
| 30              | - reddish brown at 30.0ft BGS                                 |                 |  | SB-1-30 |          |         |           |          |
| 32<br>34        |   |                 |  |         |          |         |           |          |
| 36              |   |                 |  | SB-1-35 |          |         |           |          |
| - 38<br>- 40    |   |                 |  | SB-1-40 |          |         |           |          |
| 42              |   |                 |  |         |          |         |           |          |
| 44<br>46        | - fine grained, dark brown at 45.0ft BGS                      |                 | BACKFILLED<br>WITH<br>BENTONITE<br>CHIPS AND<br>SOIL | SB-1-45 |          |         |           |          |

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## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 2 of 2

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-1 DATE COMPLETED: July 17, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: M. GANT

| ft BGS<br>-50<br>-52<br>-54                    | STRATIGRAPHIC DESCRIPTION & REMARKS                               | ft BGS      | BOREHOLE | NUMBER  | INTERVAL | REC (%) | ΠŪΕ       | ide<br>kg)          |
|--|---|-------------|----------|---------|----------|---------|-----------|---------------------|
| - 52   | CO CLAVEV SAND you firs series d lists                            | le le le le |          | NUI     | INTEI    | REC     | 'N' VALUE | Chloride<br>(mg/kg) |
|  | SC-CLAYEY SAND, very fine grained, light brown, well sorted, dry  | 50.00       | CUTTINGS | SB-1-50 |          |         |           | 8300                |
| -56<br>-58<br>-60<br>-62                       | - brown at 60.0ft BGS   |             |          | SB-1-60 |          |         |           | 8300                |
| - 64<br>- 66<br>- 68<br>- 70<br>- 72           | CL-SANDY CLAY, very fine grained, well sorted, reddish brown, dry | 70.00       | CUTTINGS | SB-1-70 |          |         |           | 13000               |
| - 74<br>- 76<br>- 78<br>- 80                   | SC-CLAYEY SAND, very fine grained, well                           | 80.00       |          | SB-1-80 |          |         |           | 11000               |
| - 82<br>- 84<br>- 86                           | - reddish brown at 85.0ft BGS                                     |             |          | SB-1-85 |          |         |           |                     |
| -86<br>-88<br>-90<br>-92<br>-94<br><u>NOTE</u> | END OF BOREHOLE @ 90.0ft BGS                                      | 90.00       |          | SB-1-90 |          |         |           | 3400                |
| -94  |   |             |          |         |          |         |           |                     |

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Page 1 of 2

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-2 DATE COMPLETED: July 18, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: M. GANT

| STRATIGRAPHIC DESCRIPTION & REMARKS                                | DEPTH<br>ft BGS   | BOREHOLE  |  |   | SAM   |  |  |
|--|---|---|--|---|---|--|--|
|  | πBGS  |   | NUMBER   | INTERVAL  | REC (%)   | 'N' VALUE  | Chloride<br>(mg/kg)  |
| SC-CLAYEY SAND, fine grained, well sorted, reddish yellow, dry     |   |   | N  |   | R   | .N.  |  |
| SM-SILTY SAND, very fine grained, well sorted, light brown, dry    | 10.00   |   |  |   |   |  |  |
| - fine grained, reddish brown at 20.0ft BGS                        |   |   | SB-2-20  |   |   |  |  |
| - pink at 30.0ft BGS   |   |   | SB-2-30  |   |   |  |  |
| SC-CLAYEY SAND, very fine grained, well sorted, reddish brown, dry | 40.00   | BACKFILLED<br>WITH<br>BENTONITE<br>CHIPS AND<br>SOIL<br>CUTTINGS  | SB-2-40  |   |   |  |  |
|  | SM-SILTY SAND, very fine grained, well<br>sorted, light brown, dry<br>- fine grained, reddish brown at 20.0ft BGS<br>- pink at 30.0ft BGS | reddish yellow, dry       10.00         SM-SILTY SAND, very fine grained, well       10.00         - fine grained, reddish brown at 20.0ft BGS       -         - pink at 30.0ft BGS       -         SC-CLAYEY SAND, very fine grained, well       40.00 | reddish yellow, dry         SM-SILTY SAND, very fine grained, well         sorted, light brown, dry         - fine grained, reddish brown at 20.0ft BGS         - pink at 30.0ft BGS | SC-CLAYEY SAND, fine grained, well sorted,<br>reddish yellow, dry<br>SM-SILTY SAND, very fine grained, well<br>of the grained, reddish brown at 20.0ft BGS<br>- pink at 30.0ft BGS<br>S8230 | SC-CLAYEY SAND, fine grained, well sorted,<br>reddish yellow, dry  SM-SILTY SAND, very fine grained, well SM-SILTY SAND, very fine grained, well of the grained, reddish brown at 20.0ft BGS  - fine grained, reddish brown at 20.0ft BGS  S8-20 S8 | SC-CLAYEY SAND, fine grained, well sorted,<br>reddish yellow, dry  SM-SILTY SAND, very fine grained, well  SM-SILTY SAND, very fine grained, well  of the grained, reddish brown at 20.0ft BGS  s8-20  pink at 30.0ft BGS  S8-23 | SC-CLAYEY SAND, fine grained, well sorted,<br>reddish yellow, dry           SM-SILTY SAND, very fine grained, well         10.00           SM-SILTY SAND, very fine grained, well         10.00           - fine grained, reddish brown at 20.0ft BGS         \$8-23           - pink at 30.0ft BGS         \$8-23 |

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## STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 2 of 2

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-2 DATE COMPLETED: July 18, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: M. GANT

| DEPTH                                       | STRATIGRAPHIC DESCRIPTION & REMARKS                           | DEPTH    | BOREHOLE               |         |          | SAMF    | PLE       |                     |
|---|---|----------|------------------------|---------|----------|---------|-----------|---------------------|
| ft BGS                                      |   | ft BGS   | BOREHOLL               | ßER     | VAL      | (%)     | Ы         | ide<br>(g)          |
|   |   |          |                        | NUMBER  | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
| _   |   |          |                        | ~       | 2        |         | -         |                     |
| 50  | CL-SANDY CLAY, very fine grained, well                        | 50.00    |                        | SB-2-50 |          |         |           | 7600                |
| 52  | sorted, slightly plastic, strong brown, dry                   |          |                        |         |          |         |           |                     |
| E   |   |          |                        |         |          |         |           |                     |
| - 54  |   |          |                        |         |          |         |           |                     |
| 56  |   |          |                        |         |          |         |           |                     |
|   |   |          |                        |         |          |         |           |                     |
| E   |   |          |                        |         |          |         |           |                     |
| 60  | - with sand at 60.0ft BGS                                     |          |                        | SB-2-60 |          |         |           | 7700                |
| 62  |   |          |                        |         |          |         |           |                     |
| -64   |   |          |                        |         |          |         |           |                     |
|   |   |          |                        |         |          |         |           |                     |
| 66<br>                                      |   |          |                        |         |          |         |           |                     |
| 68  |   |          |                        |         |          |         |           |                     |
| - 70  |   | 70.00    |                        | SB-2-70 |          |         |           | 6200                |
| E   | SM-SILTY SAND, fine grained, well sorted, reddish yellow, dry |          |                        |         |          |         |           |                     |
| 72<br>                                      |   |          |                        |         |          |         |           |                     |
| -74   |   | 75.00    |                        | SB-2-75 |          |         |           | 000                 |
| -76   | END OF BOREHOLE @ 75.0ft BGS                                  | 75.00    |                        | 5B-2-75 |          |         |           | 980                 |
| -<br>                                       |   |          |                        |         |          |         |           |                     |
|   |   |          |                        |         |          |         |           |                     |
| 80  |   |          |                        |         |          |         |           |                     |
| 82  |   |          |                        |         |          |         |           |                     |
|   |   |          |                        |         |          |         |           |                     |
|   |   |          |                        |         |          |         |           |                     |
| 년<br>19.1년 - 86                             |   |          |                        |         |          |         |           |                     |
| <sup>0</sup> ⊢88<br>≴⊢                      |   |          |                        |         |          |         |           |                     |
| 방는<br>교 - 90                                |   |          |                        |         |          |         |           |                     |
| -WI GP                                      |   |          |                        |         |          |         |           |                     |
| -01288<br>                                  |   |          |                        |         |          |         |           |                     |
| 94  |   |          |                        |         |          |         |           |                     |
| OVERBURDEN LOG 088210-WIGPU CRA_CORP.GDT 91 |   |          |                        |         |          |         |           |                     |
| RBUR  | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; RE              | EFER IUC | UKRENT ELEVATION TABLE |         |          |         |           |                     |
| OVE   |   |          |                        |         |          |         |           |                     |

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Page 1 of 2

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-3 DATE COMPLETED: July 19, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: M. GANT

|   | DEPTH                         | STRATIGRAPHIC DESCRIPTION & REMARKS                                | DEPTH     | BOREHOLE   |         |          | SAMF     | PLE       |                     |
|---|-------------------------------|--|-----------|--|---------|----------|----------|-----------|---------------------|
|   | ft BGS                        | STRATIGRAFHIC DESCRIPTION & REMARKS                                | ft BGS    | BOREHOLE   | ВЩ      | VAL      | (%)      | Ш         | ide<br>(g)          |
|   |                               |  |           |  | NUMBER  | INTERVAL | REC (%)  | 'N' VALUE | Chloride<br>(mg/kg) |
|   | -2<br>-4                      | SC-CLAYEY SAND, fine grained, well sorted, reddish yellow, dry     |           |  | 2       | ∠        | <u>ш</u> | 4         |                     |
|   | -6<br>-8<br>-10<br>-12<br>-14 | - very fine grained, light brown at 10.0ft BGS                     |           | BACKFILLED<br>WITH<br>BENTONITE<br>CHIPS AND<br>SOIL<br>CUTTINGS |         |          |          |           |                     |
| -   | - 16                          | SM-SILTY SAND, very fine grained, well sorted, reddish yellow, dry | 15.00     |  |         |          |          |           |                     |
| E   | - 18                          |  |           |  |         |          |          |           |                     |
|   | -20                           |  |           |  | SB-3-20 |          |          |           |                     |
| F   | -22                           |  |           |  | 00020   |          |          |           |                     |
| -   |                               |  |           |  |         |          |          |           |                     |
|   | -24                           | - strong brown at 25.0ft BGS                                       |           |  | SB-3-25 |          |          |           |                     |
|   | -26<br>-28                    |  |           |  |         |          |          |           |                     |
| Ē   | -30                           | SC-CLAYEY SAND, very fine grained, well                            | 30.00     | BACKFILLED   | SB-3-30 |          |          |           |                     |
| Ē   | - 32                          | sorted, reddish brown, dry   |           | WITH<br>BENTONITE<br>CHIPS AND                                   |         |          |          |           |                     |
| F   |                               |  |           | SOIL<br>CUTTINGS   |         |          |          |           |                     |
| 1111  | - 34                          | CL-SANDY CLAY, very fine grained, well                             | 35.00     |  | SB-3-35 |          |          |           |                     |
| DT 9/15                                       | -36                           | sorted, low plasticity, strong brown, dry                          |           |  |         |          |          |           |                     |
| JRP.GI  | - 38                          |  |           |  |         |          |          |           |                     |
| RA CC   | -40                           | SC-cLAYEY SAND, very fine grained, well                            | 40.00     |  | SB-3-40 |          |          |           |                     |
| GPJ C   | - 42                          | sorted, reddish brown, dry   |           |  |         |          |          |           |                     |
| 210-WI.                                       | -44                           |  |           |  |         |          |          |           |                     |
| 3 0882  | -46                           |  |           |  | SB-3-45 |          |          |           |                     |
|   |                               |  |           |  |         |          |          |           |                     |
| OVERBURDEN LOG 088210-WI.GPJ CRA_CORP.GDT 9/1 |                               | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; R                    | EFER TO C | CURRENT ELEVATION TABLE  |         |          |          |           |                     |
| OVER  |                               |  |           |  |         |          |          |           |                     |

Page 2 of 2

|   | GHD             | STRATIGRAPHIC AND II<br>(OVERB      |                 |                    |  |  |  |  |
|---|-----------------|-------------------------------------|-----------------|--------------------|--|--|--|--|
|   | PROJE           | CT NAME: LIVINGSTON RIDGE SWD NO. 2 | HOLE D          | DESIGNATION: SB-3  |  |  |  |  |
| PROJECT NUMBER: 088210-35 DATE COMPLETED: |                 |                                     |                 |                    |  |  |  |  |
|   | CLIENT          | EOG RESOURCES                       | DRILLIN         | NG METHOD: HSA     |  |  |  |  |
| LOCATION: EDDY COUNTY, NEW MEXICO FIELD   |                 |                                     |                 | Personnel: M. Gant |  |  |  |  |
|   |                 |                                     |                 |                    |  |  |  |  |
|   | DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS | DEPTH<br>ft BGS | BOREHOLE           |  |  |  |  |
|   |                 |                                     |                 |                    |  |  |  |  |

| DEPTH     | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH     | BOREHOLE               |         |          | SAMF    | PLE       |                     |
|-----------|--|-----------|------------------------|---------|----------|---------|-----------|---------------------|
| ft BGS    |  | ft BGS    | DOREHOLE               | R       | VAL      | (%)     | Ы         | ide<br>(g)          |
|           |  |           |                        | NUMBER  | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
| 50        | CL-SANDY CLAY, very fine grained, well<br>sorted, low plasticity, reddish brown, dry | 50.00     |                        | SB-3-50 |          |         |           | 62                  |
| 52        | sorted, low plasticity, reddish brown, dry   |           |                        |         |          |         |           |                     |
| 54        |  |           |                        |         |          |         |           |                     |
| 56        |  |           |                        |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |
| 60        | END OF BOREHOLE @ 60.0ft BGS   | 60.00     |                        | SB-3-60 |          |         |           | 88                  |
| 62        |  |           |                        |         |          |         |           |                     |
| 64<br>    |  |           |                        |         |          |         |           |                     |
| 66        |  |           |                        |         |          |         |           |                     |
| 68<br>    |  |           |                        |         |          |         |           |                     |
| - 70<br>- |  |           |                        |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |
| 76<br>    |  |           |                        |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |
| – 82<br>≤ |  |           |                        |         |          |         |           |                     |
| 84<br>    |  |           |                        |         |          |         |           |                     |
| 86<br>    |  |           |                        |         |          |         |           |                     |
| 88<br>    |  |           |                        |         |          |         |           |                     |
| 90        |  |           |                        |         |          |         |           |                     |
| 92<br>    |  |           |                        |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |
|           | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; RI                                     | EFER TO C | URRENT ELEVATION TABLE |         |          |         |           |                     |
|           |  |           |                        |         |          |         |           |                     |

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Page 1 of 2

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-4 DATE COMPLETED: July 19, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: M. GANT

| DEPTH            | STRATIGRAPHIC DESCRIPTION & REMARKS  | DEPTH      | BOREHOLE   |         |          | SAM     |           |                     |
|------------------|--|------------|--|---------|----------|---------|-----------|---------------------|
| ft BGS           |  | ft BGS     |  | NUMBER  | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
| -2               | SC-CLAYEY SAND, fine grained, well sorted, reddish yellow, dry                       |            |  |         |          |         |           |                     |
|                  | - very fine grained at 10.0ft BGS  |            |  |         |          |         |           |                     |
|                  | SM-SILTY SAND, very fine grained, well sorted, light brown, dry                      | 15.00      |  |         |          |         |           | 1                   |
| 20 -<br>22<br>24 | SC-CLAYEY SAND, very fine grained, well sorted, light brown, dry                     | 20.00      |  | SB-4-20 |          |         |           | 1                   |
| 26<br>28         | SM-SILTY SAND, very fine grained, well<br>sorted, strong brown, dry                  | 25.00      | BACKFILLED<br>WITH<br>BENTONITE<br>CHIPS AND<br>SOIL<br>CUTTINGS | SB-4-25 |          |         |           | 1                   |
| - 30             |  |            | BENTONITE<br>CHIPS AND<br>SOIL<br>CUTTINGS                       | SB-4-30 |          |         |           | 1                   |
|                  | CL-SANDY CLAY, very fine grained, well<br>sorted, low plasticity, reddish brown, dry | 35.00      |  | SB-4-35 |          |         |           | 1                   |
|                  | - strong brown at 40.0ft BGS   |            |  | SB-4-40 |          |         |           | 870                 |
| 44               | SC-CLAYEY SAND, very fine grained, well<br>sorted, reddish brown, dry                | 45.00      |  | SB-4-45 |          |         |           | 1                   |
| 1                | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE;  | REFER TO C | ¥/A  |         |          |         |           |                     |

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|   | (OVER)                              |                 |                        |         |          |         | -         | e 2 of 2            |
|---|-------------------------------------|-----------------|------------------------|---------|----------|---------|-----------|---------------------|
|   | NAME: LIVINGSTON RIDGE SWD NO. 2    |                 | SIGNATION: SB-4        |         |          |         |           |                     |
|   | NUMBER: 088210-35                   |                 | MPLETED: July 19, 2017 |         |          |         |           |                     |
|   | EOG RESOURCES                       |                 | GMETHOD: HSA           |         |          |         |           |                     |
| LOCATIO                                 | N: EDDY COUNTY, NEW MEXICO          | FIELD PE        | RSONNEL: M. GANT       |         |          |         |           |                     |
| DEPTH<br>ft BGS                         | STRATIGRAPHIC DESCRIPTION & REMARKS | DEPTH<br>ft BGS | BOREHOLE               |         |          | SAMF    |           |                     |
|   |                                     |                 |                        | NUMBER  | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
|   |                                     |                 |                        |         |          |         |           |                     |
| 50                                      | END OF BOREHOLE @ 50.0ft BGS        | 50.00           |                        | SB-4-50 |          |         |           | 79                  |
| 52                                      | C                                   |                 |                        |         |          |         |           |                     |
| 52                                      |                                     |                 |                        |         |          |         |           |                     |
| 54                                      |                                     |                 |                        |         |          |         |           |                     |
| 56                                      |                                     |                 |                        |         |          |         |           |                     |
| 58                                      |                                     |                 |                        |         |          |         |           |                     |
| 60                                      |                                     |                 |                        |         |          |         |           |                     |
| 62                                      |                                     |                 |                        |         |          |         |           |                     |
| 64                                      |                                     |                 |                        |         |          |         |           |                     |
| 66                                      |                                     |                 |                        |         |          |         |           |                     |
| 68                                      |                                     |                 |                        |         |          |         |           |                     |
| 70                                      |                                     |                 |                        |         |          |         |           |                     |
| 72                                      |                                     |                 |                        |         |          |         |           |                     |
| 74                                      |                                     |                 |                        |         |          |         |           |                     |
| 76                                      |                                     |                 |                        |         |          |         |           |                     |
| 78                                      |                                     |                 |                        |         |          |         |           |                     |
| 80                                      |                                     |                 |                        |         |          |         |           |                     |
| 82                                      |                                     |                 |                        |         |          |         |           |                     |
|   |                                     |                 |                        |         |          |         |           |                     |
| 86                                      |                                     |                 |                        |         |          |         |           |                     |
| 00                                      |                                     |                 |                        |         |          |         |           |                     |
| 84<br>86<br>90<br>92<br>94<br><u>No</u> |                                     |                 |                        |         |          |         |           |                     |
| 90                                      |                                     |                 |                        |         |          |         |           |                     |
| 92                                      |                                     |                 |                        |         |          |         |           |                     |
| 94                                      |                                     |                 |                        |         |          |         |           |                     |

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Page 1 of 3

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-5 DATE COMPLETED: August 18, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: S. PEREZ

| DEPTH<br>ft BGS              | STRATIGRAPHIC DESCRIPTION & REMARKS             | DEPTH<br>ft BGS | BOREHOLE |        |          | SAMF    | AMPLE     |                     |  |
|------------------------------|---|-----------------|----------|--------|----------|---------|-----------|---------------------|--|
| πBGS                         |   | πBGS            |          | NUMBER | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |  |
|                              | SEE SB-1 FOR STRATIGRAPHIC DETAILS              |                 | 602      | ž      | Ξ        | 8       | Ż         | 05                  |  |
| 2                            | SEE SE-1 FOR STRATIGRAPHIC DETAILS              |                 |          |        |          |         |           |                     |  |
| 2                            |   |                 |          |        |          |         |           |                     |  |
| 4                            |   |                 |          |        |          |         |           |                     |  |
| 6                            |   |                 |          |        |          |         |           |                     |  |
| 8                            |   |                 |          |        |          |         |           |                     |  |
| 10                           |   |                 |          |        |          |         |           |                     |  |
| 12                           |   |                 |          |        |          |         |           |                     |  |
| - 14                         |   |                 |          |        |          |         |           |                     |  |
| - 16                         |   |                 |          |        |          |         |           |                     |  |
| - 18                         |   |                 |          |        |          |         |           |                     |  |
| 20                           |   |                 |          |        |          |         |           |                     |  |
| 22                           |   |                 |          |        |          |         |           |                     |  |
| -24                          |   |                 |          |        |          |         |           |                     |  |
| - 26                         |   |                 |          |        |          |         |           |                     |  |
| 28                           |   |                 |          |        |          |         |           |                     |  |
| 30                           |   |                 |          |        |          |         |           |                     |  |
| 32                           |   |                 |          |        |          |         |           |                     |  |
| 34                           |   |                 |          |        |          |         |           |                     |  |
| 36                           |   |                 |          |        |          |         |           |                     |  |
| 38                           |   |                 |          |        |          |         |           |                     |  |
| - 38<br>- 40<br>- 42<br>- 44 |   |                 |          |        |          |         |           |                     |  |
| 42                           |   |                 |          |        |          |         |           |                     |  |
| 44                           |   |                 |          |        |          |         |           |                     |  |
| 46                           |   |                 |          |        |          |         |           |                     |  |
|                              | IOTES: MEASURING POINT ELEVATIONS MAY CHANGE; F |                 |          |        |          |         |           |                     |  |

| GHD  | STRATIGRAPHIC A<br>(O   | NSTRUN<br>URDEN                |           | ION LOG                |        |          |         | Page     | e 2 of 3            |
|--|---|--------------------------------|-----------|------------------------|--------|----------|---------|----------|---------------------|
| PROJEC <sup>-</sup><br>CLIENT:   | T NAME: LIVINGSTON RIDGE SWD NO. 2<br>T NUMBER: 088210-35<br>EOG RESOURCES<br>IN: EDDY COUNTY, NEW MEXICO | HOLE DE<br>DATE CC<br>DRILLING | SIGNATION | August 18, 2017<br>HSA | 7      |          |         |          |                     |
| DEPTH<br>ft BGS  | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS                | BOR       | EHOLE                  |        | SAMPLE   |         |          |                     |
|  |   |                                |           |                        | NUMBER | INTERVAL | REC (%) | N' VALUE | Chloride<br>(mg/kg) |
| 50<br>52<br>54<br>56<br>58<br>60<br>62<br>64<br>66<br>62<br>64<br>66<br>68<br>70<br>72<br>74<br>77<br>74<br>77<br>74<br>77<br>78<br>78<br>80<br>72<br>74<br>77<br>80<br>82<br>84<br>88<br>88<br>88<br>88<br>88<br>88<br>88<br>88<br>88<br>88<br>88<br>88 | SC-CLAYEY SAND, with silt, coarse grained, poorly graded, brown, dry                                      | 90.00                          |           |                        |        |          |         |          |                     |

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Page 3 of 3

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES

LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-5 DATE COMPLETED: August 18, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: S. PEREZ

| DEPTH       | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS | BOREHOLE                |         |          | SAMF    | PLE       |                     |
|-------------|---|-----------------|-------------------------|---------|----------|---------|-----------|---------------------|
| ft BGS      |   | ft BGS          |                         | NUMBER  | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
| 98<br>      | SP-SAND, with silt, trace clay, coarse grained sandstone, poorly graded, brown, dry | 100.00          |                         | SB-5-20 |          |         |           | 48                  |
|             |   |                 |                         | SB-5-25 |          |         |           | 760                 |
| - 112       |   |                 |                         |         |          |         |           |                     |
| - 116<br>   |   |                 |                         |         |          |         |           |                     |
|             | - trace silt and clay at 120.0ft BGS  |                 |                         | SB-5-30 |          |         |           | 82                  |
| 124         |   |                 |                         |         |          |         |           |                     |
| - 126<br>   |   |                 |                         |         |          |         |           |                     |
| 130         | END OF BOREHOLE @ 130.0ft BGS   | 130.00          |                         | SB-5-35 |          |         |           |                     |
| 2 - 132<br> |   |                 |                         |         |          |         |           |                     |
| 2<br>       |   |                 |                         |         |          |         |           |                     |
|             |   |                 |                         |         |          |         |           |                     |
| 140<br>142  |   |                 |                         |         |          |         |           |                     |
|             | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; R                                     | EFER TO C       | CURRENT ELEVATION TABLE |         |          |         |           |                     |

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Page 1 of 3

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-6 DATE COMPLETED: August 16, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: S. PEREZ

| DEPTH<br>ft BGS                        | STRATIGRAPHIC DESCRIPTION & REMARKS             | DEPTH<br>ft BGS | BOREHOLE |         |           | SAMF                |      |             |
|--|---|-----------------|----------|---------|-----------|---------------------|------|-------------|
| πBGS                                   |   | πBGS            | NUMBER   | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |      |             |
|  |   |                 |          | NUN     | INTE      | REC                 | N' < | Chic<br>(m) |
|  | SEE SB-1 FOR STRATIGRAPHIC DETAILS              |                 |          |         |           |                     |      |             |
| -2                                     |   |                 |          |         |           |                     |      |             |
| -4                                     |   |                 |          |         |           |                     |      |             |
| -6                                     |   |                 |          |         |           |                     |      |             |
| -8                                     |   |                 |          |         |           |                     |      |             |
| - 10                                   |   |                 |          |         |           |                     |      |             |
| - 12                                   |   |                 |          |         |           |                     |      |             |
| - 14                                   |   |                 |          |         |           |                     |      |             |
| - 16                                   |   |                 |          |         |           |                     |      |             |
| - 18                                   |   |                 |          |         |           |                     |      |             |
| -20                                    |   |                 |          |         |           |                     |      |             |
| -22                                    |   |                 |          |         |           |                     |      |             |
| -24                                    |   |                 |          |         |           |                     |      |             |
| - 26                                   |   |                 |          |         |           |                     |      |             |
| -28                                    |   |                 |          |         |           |                     |      |             |
| - 30                                   |   |                 |          |         |           |                     |      |             |
| - 32                                   |   |                 |          |         |           |                     |      |             |
| - 34                                   |   |                 |          |         |           |                     |      |             |
| -36                                    |   |                 |          |         |           |                     |      |             |
| - 38                                   |   |                 |          |         |           |                     |      |             |
| -40                                    |   |                 |          |         |           |                     |      |             |
| -36<br>-38<br>-40<br>-42<br>-44<br>-46 |   |                 |          |         |           |                     |      |             |
| - 44                                   |   |                 |          |         |           |                     |      |             |
| -46                                    |   |                 |          |         |           |                     |      |             |
|  | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; F | EFER TO C       |          |         |           |                     |      |             |

| ROJE        | CT NAME: LIVINGSTON RIDGE SWD NO. 2   | BURDEN)         | )<br>Signation: | SB-6                          |              |          |         | rage      | e 2 of 3            |
|-------------|---|-----------------|-----------------|-------------------------------|--------------|----------|---------|-----------|---------------------|
| ROJE        | CT NUMBER: 088210-35  | DATE CO         | MPLETED: A      | August 16, 2017               | 7            |          |         |           |                     |
| LIENT       | : EOG RESOURCES   | DRILLING        | METHOD: I       | HSA                           |              |          |         |           |                     |
| OCATI       | ION: EDDY COUNTY, NEW MEXICO  | FIELD PEI       | RSONNEL: S      | S. PEREZ                      |              |          |         |           |                     |
| EPTH<br>BGS | STRATIGRAPHIC DESCRIPTION & REMARKS   | DEPTH<br>ft BGS | BORE            | HOLE                          | <u>ل</u> ا ۲ |          | SAMPL   |           |                     |
|             |   |                 |                 |                               | NUMBER       | INTERVAL | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
| 50          |   |                 |                 |                               |              |          |         |           |                     |
| 52          |   |                 |                 | CHIPS AND<br>SOIL<br>CUTTINGS |              |          |         |           |                     |
| 54          |   |                 |                 |                               |              |          |         |           |                     |
| 56          |   |                 |                 |                               |              |          |         |           |                     |
| 58          |   |                 |                 |                               |              |          |         |           |                     |
| 80          |   |                 |                 |                               |              |          |         |           |                     |
| 62<br>64    |   |                 |                 |                               |              |          |         |           |                     |
| 6           |   |                 |                 |                               |              |          |         |           |                     |
| 88          |   |                 |                 |                               |              |          |         |           |                     |
| 70          |   |                 |                 |                               |              |          |         |           |                     |
| 72          |   |                 |                 |                               |              |          |         |           |                     |
| 74          | CL-SILTY CLAY, few sand, fine garined,  | 75.00           |                 |                               |              |          |         |           |                     |
| 76<br>78    | reddish brown, dry  |                 |                 |                               |              |          |         |           |                     |
| 30          |   |                 |                 |                               |              |          |         |           |                     |
| 32          |   |                 |                 |                               |              |          |         |           |                     |
| 34          |   |                 |                 |                               |              |          |         |           |                     |
| 86          | SW-SILTY SAND, trace fine gravel, coarse grained, well graded, reddish brown, dry | 86.50           |                 |                               | SB-6-85      | $\mid$   |         | 45        | <30                 |
| 38<br>90    |   |                 |                 |                               |              |          |         |           |                     |
| 92          |   |                 |                 |                               |              |          |         |           |                     |
| 94          |   |                 |                 |                               |              |          |         |           |                     |
|             |   |                 |                 |                               | SB-6-95      | $\succ$  | 1       | 15        | <30                 |

Page 3 of 3

PROJECT NAME: LIVINGSTON RIDGE SWD NO. 2 PROJECT NUMBER: 088210-35 CLIENT: EOG RESOURCES LOCATION: EDDY COUNTY, NEW MEXICO

HOLE DESIGNATION: SB-6 DATE COMPLETED: August 16, 2017 DRILLING METHOD: HSA FIELD PERSONNEL: S. PEREZ

| DEPTH                   | STRATIGRAPHIC DESCRIPTION & REMARKS              | DEPTH    | BOREHOLE               |        | 1           | SAMF    | PLE       |                     |
|-------------------------|--|----------|------------------------|--------|-------------|---------|-----------|---------------------|
| ft BGS                  |  | ft BGS   |                        | BER    | <b>RVAL</b> | (%)     | TUE       | kg)                 |
|                         |  |          |                        | NUMBER | INTERVAL    | REC (%) | 'N' VALUE | Chloride<br>(mg/kg) |
| -                       | END OF BOREHOLE @ 96.5ft BGS                     | 96.50    | 22                     | -      | $\geq$      |         | -         |                     |
| -98                     |  |          |                        |        |             |         |           |                     |
| - 100                   |  |          |                        |        |             |         |           |                     |
|                         |  |          |                        |        |             |         |           |                     |
| - 102                   |  |          |                        |        |             |         |           |                     |
| - 104                   |  |          |                        |        |             |         |           |                     |
| - 106                   |  |          |                        |        |             |         |           |                     |
| - 108                   |  |          |                        |        |             |         |           |                     |
| -110                    |  |          |                        |        |             |         |           |                     |
| -112                    |  |          |                        |        |             |         |           |                     |
| - 114                   |  |          |                        |        |             |         |           |                     |
| - 116                   |  |          |                        |        |             |         |           |                     |
| - 118                   |  |          |                        |        |             |         |           |                     |
| - 120                   |  |          |                        |        |             |         |           |                     |
| - 122                   |  |          |                        |        |             |         |           |                     |
| - 124                   |  |          |                        |        |             |         |           |                     |
| - 126                   |  |          |                        |        |             |         |           |                     |
| - 128                   |  |          |                        |        |             |         |           |                     |
| - 130                   |  |          |                        |        |             |         |           |                     |
| - 132                   |  |          |                        |        |             |         |           |                     |
| - 132<br>- 134<br>- 136 |  |          |                        |        |             |         |           |                     |
| - 136                   |  |          |                        |        |             |         |           |                     |
| - 130                   |  |          |                        |        |             |         |           |                     |
| - 140                   |  |          |                        |        |             |         |           |                     |
| - 140<br>- 142          |  |          |                        |        |             |         |           |                     |
| 1                       | NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; RE | FER TO C | URRENT ELEVATION TABLE | 1      |             |         |           |                     |
|                         |  |          |                        |        |             |         |           |                     |

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## Attachment 2 Laboratory Reports



March 28, 2018 Bernie Bockisch GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

RE: Livingston

OrderNo.: 1803842

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/14/2018 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

| Hall Environ                  | mental Analys     | is Laborate | ory, Inc. |              | Analytical Report<br>Lab Order: 1803842<br>Date Reported: 3/28/2018 |                   |
|-------------------------------|-------------------|-------------|-----------|--------------|---|-------------------|
|                               | GHD<br>Livingston |             |           |              | Lab Order: 1803842  |                   |
| Lab ID:                       | 1803842-001       |             |           |              | Pate: 3/12/2018 10:50:00 AM   |                   |
| Client Sample ID:<br>Analyses | S-088210-35-03121 | Result      | PQL Qual  |              | trix: SOIL<br>DF Date Analyzed Batcl                                | h ID              |
|                               |                   | Result      | 1.42. 4   |              | · · · ·   |                   |
| Chloride                      | 0.0: ANIONS       | ND          | 30        | mg/Kg        | Analyst: M<br>20 3/27/2018 5:03:30 PM 37                            | <b>RA</b><br>7258 |
| Lab ID:                       | 1803842-002       |             |           | Collection D | ate: 3/12/2018 10:52:00 AM  |                   |
| Client Sample ID:             | S-088210-35-03121 | 18-MG-TP-20 |           | Mat          | trix: SOIL  |                   |
| Analyses                      |                   | Result      | PQL Qual  | Units        | DF Date Analyzed Batch  | h ID              |
| EPA METHOD 30                 | 0.0: ANIONS       |             |           |              | Analyst: M  | RA                |
| Chloride                      |                   | ND          | 30        | mg/Kg        | 20 3/27/2018 5:15:54 PM 37  | 7258              |
| Lab ID:                       | 1803842-003       |             |           | Collection D | ate: 3/12/2018 10:55:00 AM  |                   |
| Client Sample ID:             | S-088210-35-03121 | 18-MG-TP-21 |           | Mat          | trix: SOIL  |                   |
| Analyses                      |                   | Result      | PQL Qual  | Units        | DF Date Analyzed Batch  | h ID              |
| EPA METHOD 30                 | 0.0: ANIONS       |             |           |              | Analyst: M  | RA                |
| Chloride                      |                   | ND          | 30        | mg/Kg        | 20 3/27/2018 8:22:01 PM 37  | 7270              |
| Lab ID:                       | 1803842-004       |             |           | Collection D | ate: 3/12/2018 11:45:00 AM  |                   |
| Client Sample ID:             | S-088210-35-03121 | 18-MG-TP-22 |           | Mat          | trix: SOIL  |                   |
| Analyses                      |                   | Result      | PQL Qual  | Units        | DF Date Analyzed Batch  | h ID              |
| EPA METHOD 30                 | 0.0: ANIONS       |             |           |              | Analyst: M  | RA                |
| Chloride                      |                   | ND          | 30        | mg/Kg        | 20 3/27/2018 9:24:04 PM 37  | 7270              |
| Lab ID:                       | 1803842-005       |             |           | Collection D | ate: 3/12/2018 11:48:00 AM  |                   |
| Client Sample ID:             | S-088210-35-03121 | 18-MG-TP-23 |           | Mat          | trix: SOIL  |                   |
| Analyses                      |                   | Result      | PQL Qual  | Units        | DF Date Analyzed Batch  | h ID              |
| EPA METHOD 30                 | 0.0: ANIONS       |             |           |              | Analyst: <b>M</b>   | RA                |
| Chloride                      |                   | 130         | 30        | mg/Kg        | •   | 7270              |

- Qualifiers:
- \* Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- J Analyte detected below quantitation limits Page 1 of 4
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environ      | mental Analys     | is Laborato | ory, Inc. |                 | Analytical Report<br>Lab Order: 1803842<br>Date Reported: 3/28 | /2018      |
|-------------------|-------------------|-------------|-----------|-----------------|--|------------|
|                   | GHD<br>Livingston |             |           | L               | ab Order: 18038  | 342        |
| Lab ID:           | 1803842-006       |             | (         |                 | : 3/12/2018 11:50:00 A   | AM         |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-24  |           | Matrix          | : SOIL   |            |
| Analyses          |                   | Result      | PQL Qual  | Units           | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |                 | Ana  | alyst: MRA |
| Chloride          |                   | 41          | 30        | mg/Kg           | 20 3/27/2018 9:48:53   | PM 37270   |
| Lab ID:           | 1803842-007       |             |           | Collection Date | : 3/12/2018 11:55:00 A   | AM         |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-25  |           | Matrix          | : SOIL   |            |
| Analyses          |                   | Result      | PQL Qual  | Units           | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |                 | Ana  | alyst: MRA |
| Chloride          |                   | 59          | 30        | mg/Kg           | 20 3/27/2018 10:01:17  | 7 PM 37270 |
| Lab ID:           | 1803842-008       |             |           | Collection Date | : 3/12/2018 12:55:00 H   | РМ         |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-26  |           | Matrix          | : SOIL   |            |
| Analyses          |                   | Result      | PQL Qual  | Units           | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |                 | Ana  | alyst: MRA |
| Chloride          |                   | 50          | 30        | mg/Kg           | 20 3/27/2018 10:13:42  | 2 PM 37270 |
| Lab ID:           | 1803842-009       |             |           | Collection Date | : 3/12/2018 12:57:00 H   | РМ         |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-27  |           | Matrix          | : SOIL   |            |
| Analyses          |                   | Result      | PQL Qual  | Units           | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |                 | Ana  | alyst: MRA |
| Chloride          |                   | ND          | 30        | mg/Kg           | 20 3/27/2018 10:26:07  | 7 PM 37270 |
| Lab ID:           | 1803842-010       |             |           | Collection Date | : 3/12/2018 1:30:00 PI   | Ν          |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-28  |           | Matrix          | : SOIL   |            |
| Analyses          |                   | Result      | PQL Qual  | Units           | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |                 | Ana  | alyst: MRA |
| Chloride          |                   | ND          | 30        | mg/Kg           | 20 3/27/2018 10:38:37  | I PM 37270 |

- Qualifiers:
- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environ      | mental Analysi    | s Laborato | ory, Inc. |              | Analytical Report<br>Lab Order: 1803842<br>Date Reported: 3/28/ | 2018      |
|-------------------|-------------------|------------|-----------|--------------|---|-----------|
|                   | GHD<br>ivingston  |            |           |              | <b>Lab Order:</b> 18038   | 42        |
| Lab ID:           | 1803842-011       |            |           | Collection D | pate: 3/12/2018 1:33:00 PM                                      | Л         |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-29 |           | Mat          | trix: SOIL  |           |
| Analyses          |                   | Result     | PQL Qua   | al Units     | DF Date Analyzed  | Batch ID  |
| EPA METHOD 300    | .0: ANIONS        |            |           |              | Ana   | lyst: MRA |
| Chloride          |                   | ND         | 30        | mg/Kg        | 20 3/27/2018 10:50:55   | PM 37270  |
| Lab ID:           | 1803842-012       |            |           | Collection D | ate: 3/12/2018 2:25:00 PM                                       | Л         |
| Client Sample ID: | S-088210-35-03121 | 8-MG-TP-30 |           | Mat          | trix: SOIL  |           |
| Analyses          |                   | Result     | PQL Qua   | al Units     | DF Date Analyzed  | Batch ID  |
| EPA METHOD 300    | .0: ANIONS        |            |           |              | Ana   | lyst: MRA |
| Chloride          |                   | ND         | 30        | mg/Kg        | 20 3/27/2018 11:28:08   | PM 37270  |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- J Analyte detected below quantitation limits Page 3 of 4
- Р 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.

| WO#: | 1803842   |
|------|-----------|
|      | 28_Mar_18 |

Page 4 of 4

| 28-Mar-1 | 8 |
|----------|---|
|----------|---|

| Client:<br>Project: | GHD<br>Livingstor | n                    |           |             |                  |           |               |      |          |      |
|---------------------|-------------------|----------------------|-----------|-------------|------------------|-----------|---------------|------|----------|------|
| Sample ID           | MB-37258          | SampType: <b>m</b>   | blk       | Tes         | tCode: EF        | PA Method | 300.0: Anion  | S    |          |      |
| Client ID:          | PBS               | Batch ID: 37         | 258       | R           | RunNo: <b>50</b> | 0104      |               |      |          |      |
| Prep Date:          | 3/27/2018         | Analysis Date: 3     | /27/2018  | S           | SeqNo: 16        | 623718    | Units: mg/K   | g    |          |      |
| Analyte<br>Chloride |                   | Result PQL<br>ND 1.5 |           | SPK Ref Val | %REC             | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Sample ID           | LCS-37258         | SampType: Ic         | s         | Tes         | tCode: EF        | PA Method | 300.0: Anion: | s    |          |      |
| Client ID:          | LCSS              | Batch ID: 37         | 258       | R           | RunNo: <b>5(</b> | 0104      |               |      |          |      |
| Prep Date:          | 3/27/2018         | Analysis Date: 3     | /27/2018  | S           | SeqNo: 16        | 623719    | Units: mg/K   | g    |          |      |
| Analyte             |                   | Result PQL           | SPK value | SPK Ref Val | %REC             | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |                   | 14 1.5               | 15.00     | 0           | 95.1             | 90        | 110           |      |          |      |
| Sample ID           | MB-37270          | SampType: <b>m</b>   | blk       | Tes         | tCode: EF        | PA Method | 300.0: Anion  | s    |          |      |
| Client ID:          | PBS               | Batch ID: 37         | 270       | R           | RunNo: <b>5(</b> | 0104      |               |      |          |      |
| Prep Date:          | 3/27/2018         | Analysis Date: 3     | /27/2018  | S           | SeqNo: 16        | 623784    | Units: mg/K   | g    |          |      |
| Analyte             |                   | Result PQL           | SPK value | SPK Ref Val | %REC             | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
| Chloride            |                   | ND 1.5               |           |             |                  |           |               |      |          |      |
| Sample ID           | LCS-37270         | SampType: Ic         | S         | Tes         | tCode: EF        | PA Method | 300.0: Anion  | S    |          |      |
| Client ID:          | LCSS              | Batch ID: 37         | 270       | R           | RunNo: <b>5(</b> | 0104      |               |      |          |      |
| Prep Date:          | 3/27/2018         | Analysis Date: 3     | /27/2018  | S           | SeqNo: 16        | 623785    | Units: mg/K   | g    |          |      |
| Analyte             |                   | Result PQL           | SPK value | SPK Ref Val | %REC             | LowLimit  | HighLimit     | %RPD | RPDLimit | Qual |
|                     |                   | 14 1.5               | 15.00     | 0           | 93.6             | 90        | 110           |      |          |      |

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

| HALL<br>ENVIRONMENTAL<br>ANALYSIS<br>LABORATORY   | TEL: 505-345-3975              | Analysis Laboratory<br>4901 Hawkins NE<br>uquerque, NM 87109<br>FAX: 505-345-4107<br>illenvironmental.com | Sam   | ple Log-In Check List  |
|---|--------------------------------|---|---|--|
| Client Name: GHD  | Work Order Number:             | 1803842   |   | RcptNo: 1  |
| Received By: Erin Melendrez   | 3/14/2018 9:15:00 AM           | И   | LIA   | 2  |
| Completed By: Dennis Suazo  | 3/15/2018 8:58:09 AM           | I   | ani qu                                      | σ  |
| Reviewed By: 572 03/15/18   |                                | U<br>F<br>Lakelee   | d Bry                                       | MW315/18   |
| <u>Chain of Custody</u>   |                                |   |   |  |
| 1. Is Chain of Custody complete?  |                                | Yes 🔽   | No 🗌  | Not Present  |
| 2. How was the sample delivered?  |                                | <u>Courier</u>  |   |  |
| Log In<br>3. Was an attempt made to cool the samples?                                     |                                | Yes 🗹   | No 🗌  | NA []]   |
| 4. Were all samples received at a temperature o   | f ≥0° C to 6.0°C               | Yes 🗹   | No 🗆  |  |
| 5. Sample(s) in proper container(s)?  |                                | Yes 🗹   | No 🗌  |  |
| 6. Sufficient sample volume for indicated test(s)?  | ?                              | Yes 🗹   | No 🗌  |  |
| 7, Are samples (except VOA and ONG) properly  | preserved?                     | Yes 🔽   | No 🗌  |  |
| 8. Was preservative added to bottles?   |                                | Yes 🗌   | No 🗹  | NA 🗌   |
| 9. VOA vials have zero headspace?   |                                | Yes   | No 🗆  | No VOA Vials 🗹   |
| 10. Were any sample containers received broken  | ?                              | Yes 🗆   | No 🗹 🛛                                      | # - f  |
| 11. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)       |                                | Yes 🗹   | No 🗆  | # of preserved<br>bottles checked<br>for pH:<br>(<2 or >12 unless noted) |
| 12. Are matrices correctly identified on Chain of C                                       | ustody?                        | Yes 🖌   | No 🗆 🛛                                      | Adjusted?  |
| 13, Is it clear what analyses were requested?   |                                | _   |   |  |
| 14. Were all holding times able to be met?<br>(If no, notify customer for authorization.) |                                |   | No 🗆 🗌                                      | Checked by:  |
| <u>Special Handling (if applicable)</u>   |                                |   |   |  |
| 15. Was client notified of all discrepancies with the                                     | nis order?                     | Yes 🗌   | No 🗌  | NA 🗹   |
| Person Notified:  | Date:                          |   |   |  |
| By Whom:  | Via:                           | eMail Dhone   | e 📋 Fax                                     | In Person  |
| Regarding:  | ********                       | ***   |   |  |
| Client Instructions:  |                                | ······  |   |  |
| 16. Additional remarks:   |                                |   |   |  |
|   | al Intact Seal No S<br>Present | eal Date Sign   | ned By                                      |  |
|   |                                |   | 1779 TA TA TA TA TA TA TA TA TA TA TA TA TA |  |

Page 1 of 1

|                         |                    |               | www.rianerivirorimental.com<br>4901 Hawkins NE - Albuquergue, NM 87109 | Tel. 505-345-3975 Fax 505-345-4107 | Analysis              | (٣<br>(٥)        | o se <sup>2</sup><br>(2M<br>(2M<br>(2M | ) H9T -<br>10 / D8<br>10 / 0.<br>10 / 0.<br>10 / 10<br>10 br>10 / 10<br>10<br>10 / 10<br>10<br>10 / 10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1 | 001<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9<br>9 | ВТЕХ + МТЕ<br>ВТЕХ + МТЕ<br>ВТРХ + МТЕ<br>В7РН 8015В<br>ТРН (Мећо<br>ЕDВ (Мећо<br>В270 (8310<br>8250В (VOA<br>8250В (VOA<br>8250В (VOA<br>8250 (56mi-<br>СЪ [6<∂3<br>8270 (56mi- | X                            |   |      |                                  |                           |                               |      |      |   |                                 | ×.   |       | Remarks:                 |                 |                             | submitted to Half 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. |
|-------------------------|--------------------|---------------|--|------------------------------------|-----------------------|------------------|--|--|---|--|------------------------------|---|------|----------------------------------|---------------------------|-------------------------------|------|------|---|---------------------------------|------|-------|--------------------------|-----------------|-----------------------------|---|
| Turn-Around Time:       | □ Standard □ Rush  | Project Name: | Livingston   | Project #:                         | 088210.35             | Project Manager: | Bernard Backisch                       | Sampler: M C   | emperature: 5, 5  | er Preservative<br>1# Type<br>1/8@? 842  | Horsell Loc TCE 01           | 002                                       | 003  | 1 004                            | 500                       | 006                           | 007  | 800  | 004   | 010 010                         | 110  | 1 012 | Received by: Date Time R | Xh1 313/18 1300 | M (UNTER) BANG TH           | racted to other accredited laboratories. This serves as notice of this poo  |
| Chain-of-Custody Record | GHD Services, The  |               | Mailing Address: 6121 Indian School Bre200                             |                                    | Phone #: 505 884 0672 | eghd.com         | □ Level 4 (Full Validation)            | □ Other  |   | Matrix Sample Request ID   | S sosale 35-oslare . McTP-19 | 2 - 2 - 2 - 2 - 0 - 2 - 0 - 2 - 0 - 2 - 2 |      | 5 97. 2 M. 3 10 12 0 25 0 12 3 2 | 5 Statioissians. M. TP.23 | HC. d.L W. SICKSO. SCORSO.S Q |      |      | 7 Second | D S.OVTALO 36.021218. M. TP. 38 |      | S     | Relinguished by:         |                 | Relinquighed by:            |   |
| Cha                     | $client: \bigcirc$ |               | Mailing Addr   | NEAlburn                           | Phone #:              | email or Fax     | QA/QC Package:<br>□ Standard           | Accreditation  | 🗆 EDD (Type)  | Date   | 3/12/18 1050                 | 1052                                      | 1655 | SHU                              | 11143                     | 1150                          | 5511 | 1255 | 1251  | 1330                            | 1333 |       |                          | ¥13/18/15a      | Date: Time:<br>3/13/10-1970 | If necess   |

**Released to Imaging:** 7/7/2023 11:38:29 AM



March 27, 2018 Bernie Bockisch GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX 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.: 1803759

RE: Livingston

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/14/2018 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

| Hall Environ      | mental Analys     | is Laborato | ory, Inc. |              | Analytical Report<br>Lab Order: 1803759<br>Date Reported: 3/27/2 | 2018     |
|-------------------|-------------------|-------------|-----------|--------------|--|----------|
|                   | GHD<br>Livingston |             |           |              | Lab Order: 180375  | 59       |
| Lab ID:           | 1803759-001       |             |           | Collection D | pate: 3/12/2018 2:30:00 PM                                       | [        |
| Client Sample ID: | S-088210-35-0312  | 18-MG-TP-31 |           | Mat          | trix: SOIL   |          |
| Analyses          |                   | Result      | PQL Qual  | Units        | DF Date Analyzed   | Batch ID |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |              | Anal   | yst: MRA |
| Chloride          |                   | ND          | 30        | mg/Kg        | 20 3/26/2018 11:16:24  | PM 37248 |
| Lab ID:           | 1803759-002       |             |           | Collection D | ate: 3/13/2018 12:10:00 Pl                                       | М        |
| Client Sample ID: | S-088210-35-0313  | 18-MG-TP-32 |           | Mat          | trix: SOIL   |          |
| Analyses          |                   | Result      | PQL Qual  | Units        | DF Date Analyzed   | Batch ID |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |              | Anal   | yst: MRA |
| Chloride          |                   | 65          | 30        | mg/Kg        | 20 3/26/2018 11:28:49  | PM 37248 |
| Lab ID:           | 1803759-003       |             |           | Collection D | ate: 3/13/2018 12:12:00 Pl                                       | М        |
| Client Sample ID: | S-088210-35-0313  | 18-MG-TP-33 |           | Mat          | trix: SOIL   |          |
| Analyses          |                   | Result      | PQL Qual  | Units        | DF Date Analyzed   | Batch ID |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |              | Anal   | yst: MRA |
| Chloride          |                   | ND          | 30        | mg/Kg        | 20 3/26/2018 11:41:13  | PM 37248 |
| Lab ID:           | 1803759-004       |             |           | Collection D | ate: 3/13/2018 12:15:00 Pl                                       | М        |
| Client Sample ID: | S-088210-35-0313  | 18-MG-TP-34 |           | Mat          | trix: SOIL   |          |
| Analyses          |                   | Result      | PQL Qual  | Units        | DF Date Analyzed   | Batch ID |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |              | Anal   | yst: MRA |
| Chloride          |                   | 110         | 30        | mg/Kg        | 20 3/27/2018 12:18:26  | AM 37248 |
| Lab ID:           | 1803759-005       |             |           | Collection D | ate: 3/13/2018 12:17:00 Pl                                       | М        |
| Client Sample ID: | S-088210-35-0313  | 18-MG-TP-35 |           | Mat          | trix: SOIL   |          |
| Analyses          |                   | Result      | PQL Qual  | Units        | DF Date Analyzed   | Batch ID |
| EPA METHOD 300    | 0.0: ANIONS       |             |           |              | Anal   | yst: MRA |
| Chloride          |                   | 67          | 30        | mg/Kg        | 20 3/27/2018 12:30:50  | -        |

- Qualifiers:
- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Lab ID:           | HD<br>vingston<br>1803759-006<br>S-088210-35-031318- |          |          | L               | ab Order: 18037        | 59         |
|-------------------|--|----------|----------|-----------------|------------------------|------------|
| Client Sample ID: |  |          |          |                 |                        |            |
| -                 | S-088210-35-031318-                                  |          |          |                 | : 3/13/2018 12:20:00 F | PM         |
| Analyses          |  | MG-TP-36 |          | Matrix          | : SOIL                 |            |
| <b>J</b>          |  | Result   | PQL Qual | Units           | DF Date Analyzed       | Batch ID   |
| EPA METHOD 300.0  | ): ANIONS  |          |          |                 | Ana                    | alyst: MRA |
| Chloride          |  | ND       | 30       | mg/Kg           | 20 3/27/2018 1:08:03   | AM 37248   |
| Lab ID:           | 1803759-007  |          |          | Collection Date | : 3/13/2018 12:22:00 F | РМ         |
| Client Sample ID: | S-088210-35-031318-                                  | MG-TP-37 |          | Matrix          | : SOIL                 |            |
| Analyses          |  | Result   | PQL Qual | Units           | DF Date Analyzed       | Batch ID   |
| EPA METHOD 300.0  | ): ANIONS  |          |          |                 | Ana                    | alyst: MRA |
| Chloride          |  | ND       | 30       | mg/Kg           | 20 3/27/2018 1:20:28   | AM 37248   |
| Lab ID:           | 1803759-008  |          |          | Collection Date | : 3/13/2018 12:25:00 F | PM         |
| Client Sample ID: | S-088210-35-031318-                                  | MG-TP-38 |          | Matrix          | : SOIL                 |            |
| Analyses          |  | Result   | PQL Qual | Units           | DF Date Analyzed       | Batch ID   |
| EPA METHOD 300.0  | ): ANIONS  |          |          |                 | Ana                    | alyst: MRA |
| Chloride          |  | ND       | 30       | mg/Kg           | 20 3/27/2018 1:32:53   | AM 37248   |
| Lab ID:           | 1803759-009  |          |          | Collection Date | : 3/13/2018 12:27:00 F | РМ         |
| Client Sample ID: | S-088210-35-031318-                                  | MG-SP-1  |          | Matrix          | : SOIL                 |            |
| Analyses          |  | Result   | PQL Qual | Units           | DF Date Analyzed       | Batch ID   |
| EPA METHOD 300.0  | ): ANIONS  |          |          |                 | Ana                    | alyst: MRA |
| Chloride          |  | 250      | 30       | mg/Kg           | 20 3/15/2018 2:11:26   | PM 37043   |
| Lab ID:           | 1803759-010  |          | (        | Collection Date | : 3/13/2018 12:30:00 F | РМ         |
| Client Sample ID: | S-088210-35-031318-                                  | MG-SP-2  |          | Matrix          | : SOIL                 |            |
| Analyses          |  | Result   | PQL Qual | Units           | DF Date Analyzed       | Batch ID   |
| EPA METHOD 300.0  | ): ANIONS  |          |          |                 | Ana                    | alyst: MRA |
| Chloride          |  | 220      | 30       | mg/Kg           | 20 3/15/2018 2:48:39   | -          |

- Qualifiers:
- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| Hall Environ      | mental Analys     | is Laborat | ory, Inc. |              | Analytical Report<br>Lab Order: 1803759<br>Date Reported: 3/27 |            |
|-------------------|-------------------|------------|-----------|--------------|--|------------|
|                   | GHD<br>.ivingston |            |           |              | <b>Lab Order:</b> 18037  | /59        |
| Lab ID:           | 1803759-011       |            |           | Collection D | ate: 3/13/2018 12:32:00 H                                      | РМ         |
| Client Sample ID: | S-088210-35-03131 | 8-MG-SP-3  |           | Mat          | trix: SOIL   |            |
| Analyses          |                   | Result     | PQL Qu    | al Units     | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | .0: ANIONS        |            |           |              | Ana  | alyst: MRA |
| Chloride          |                   | 45         | 30        | mg/Kg        | 20 3/15/2018 3:01:03   | PM 37043   |
| Lab ID:           | 1803759-012       |            |           | Collection D | ate: 3/13/2018 12:35:00 H                                      | РМ         |
| Client Sample ID: | S-088210-35-03131 | 8-MG-SP-4  |           | Mat          | trix: SOIL   |            |
| Analyses          |                   | Result     | PQL Qu    | al Units     | DF Date Analyzed   | Batch ID   |
| EPA METHOD 300    | .0: ANIONS        |            |           |              | Ana  | alyst: MRA |
| Chloride          |                   | 140        | 30        | mg/Kg        | 20 3/15/2018 3:13:28   | PM 37043   |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

| WO#: | 1803759   |
|------|-----------|
|      | 27-Mar-18 |

Page 4 of 4

| Client:                             | GHD       |   |           |                     |                                    |                   |                            |           |          |      |
|-------------------------------------|-----------|---|-----------|---------------------|------------------------------------|-------------------|----------------------------|-----------|----------|------|
| Project:                            | Livingsto | n   |           |                     |                                    |                   |                            |           |          |      |
| Sample ID                           | MB-37043  | SampType: <b>ml</b>                                     | blk       | Test                | tCode: EP                          | PA Method         | 300.0: Anion:              | 5         |          |      |
| Client ID:                          | PBS       | Batch ID: 37  | 043       | R                   | unNo: <b>49</b>                    | 9843              |                            |           |          |      |
| Prep Date:                          | 3/15/2018 | Analysis Date: 3/                                       | 15/2018   | S                   | eqNo: 16                           | 613173            | Units: mg/K                | g         |          |      |
| Analyte<br>Chloride                 |           | Result PQL<br>ND 1.5                                    | SPK value | SPK Ref Val         | %REC                               | LowLimit          | HighLimit                  | %RPD      | RPDLimit | Qual |
|                                     |           | _   |           |                     |                                    |                   |                            |           |          |      |
| Sample ID                           | LCS-37043 | SampType: Ics   | 6         | Test                | Code: EP                           | PA Method         | 300.0: Anions              | 6         |          |      |
| Client ID:                          | LCSS      | Batch ID: 37  | 043       | R                   | unNo: <b>49</b>                    | 9843              |                            |           |          |      |
| Prep Date:                          | 3/15/2018 | Analysis Date: 3/                                       | 15/2018   | S                   | eqNo: 16                           | 613174            | Units: mg/K                | g         |          |      |
| Analyte                             |           | Result PQL  | SPK value | SPK Ref Val         | %REC                               | LowLimit          | HighLimit                  | %RPD      | RPDLimit | Qual |
| Chloride                            |           | 15 1.5  | 15.00     | 0                   | 96.7                               | 90                | 110                        |           |          |      |
| Sample ID                           | MB-37248  | SampType: ml  | blk       | Test                | tCode: EP                          | PA Method         | 300.0: Anion               | 6         |          |      |
| Client ID:                          | PBS       | Batch ID: 37  | 248       | R                   | unNo: <b>50</b>                    | 0081              |                            |           |          |      |
| Prep Date:                          | 3/26/2018 | Analysis Date: 3/                                       | /26/2018  | s                   | eqNo: 16                           | 621907            | Units: mg/K                | g         |          |      |
|                                     |           | ,   |           | -                   |                                    |                   | -                          | -         |          |      |
| Analyte                             |           | Result PQL  |           | SPK Ref Val         | %REC                               | LowLimit          | HighLimit                  | -<br>%RPD | RPDLimit | Qual |
| Analyte<br>Chloride                 |           |   |           |                     | %REC                               | LowLimit          | HighLimit                  | %RPD      | RPDLimit | Qual |
| Chloride                            | LCS-37248 | Result PQL  | SPK value | SPK Ref Val         |                                    |                   | HighLimit<br>300.0: Anions |           | RPDLimit | Qual |
| Chloride                            |           | Result PQL<br>ND 1.5                                    | SPK value | SPK Ref Val         |                                    | PA Method         |                            |           | RPDLimit | Qual |
| Chloride<br>Sample ID               | LCSS      | Result     PQL       ND     1.5       SampType:     Ics | SPK value | SPK Ref Val<br>Test | tCode: EP                          | PA Method<br>0081 |                            | 6         | RPDLimit | Qual |
| Chloride<br>Sample ID<br>Client ID: | LCSS      | ResultPQLND1.5SampType:IcsBatch ID:37                   | SPK value | SPK Ref Val<br>Test | Code: EP<br>tunNo: 50<br>SeqNo: 16 | PA Method<br>0081 | 300.0: Anion:              | 6         | 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
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

|  | Page | 120 | of 136 |
|--|------|-----|--------|
|--|------|-----|--------|

| HALL<br>ENVIRONMENTAL<br>ANALYSIS<br>LABORATORY   |  | 001 Hawkins NE<br>rque, NM 87109 S<br>: 505-345-4107 | ample Log-In Check List               |                   |  |  |  |
|---|--|--|---------------------------------------|-------------------|--|--|--|
| Client Name: GHD  | Work Order Number: 180                       | )3759  | RcptNo                                | : 1               |  |  |  |
| · ·   | 3/14/2018 9:15:00 AM<br>3/14/2018 9:53:12 AM | UL M   | 4                                     |                   |  |  |  |
| Reviewed By: DDS 3114/18  | labe   | red by   | ENM                                   | <b>-</b> .        |  |  |  |
| Chain of Custody  | ν.   |  |                                       | ·                 |  |  |  |
| 1. Is Chain of Custody complete?  | Yes  | s 🗹 No 🤅   | Not Present                           |                   |  |  |  |
| 2 How was the sample delivered?   |  | irier  | · · · · · · · · · · · · · · · · · · · |                   |  |  |  |
| Log In<br>3. Was an attempt made to cool the samples?                                     | Yes  | No 🛛   |                                       |                   |  |  |  |
| 4. Were all samples received at a temperature of  | >0° C to 6.0°C Yes                           | No [   | NA .                                  |                   |  |  |  |
| 5. Sample(s) in proper container(s)?  | Yes  | No [   |                                       |                   |  |  |  |
| 6. Sufficient sample volume for indicated test(s)?  | Yes  | No 🗌   |                                       |                   |  |  |  |
| 7. Are samples (except VOA and ONG) properly p  | reserved? Yes                                | ✓ No 🗌   |                                       |                   |  |  |  |
| 8. Was preservative added to bottles?   | Yes  | 🗌 No 💆   |                                       |                   |  |  |  |
| 9. VOA vials have zero headspace?   | Yes  | No 🗌   | 🗌 No VOA Viais 🗹                      |                   |  |  |  |
| 10. Were any sample containers received broken?   | Yes  | No No  | # of preserved bottles checked        |                   |  |  |  |
| 11. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)       | Yes  | ✓ No [   | for pH:                               | >12 unless noted) |  |  |  |
| 12. Are matrices correctly identified on Chain of Cus                                     | tody? Yes                                    | ✓ No   | Adjusted?                             |                   |  |  |  |
| 13. Is it clear what analyses were requested?   | Yes  | ✓ No [   |                                       |                   |  |  |  |
| 14. Were all holding times able to be met?<br>(If no, notify customer for authorization.) | Yes  | ✓ No   | Checked by:                           |                   |  |  |  |
| Special Handling (if applicable)  |  |  | · · ·                                 |                   |  |  |  |
| 15. Was client notified of all discrepancies with this                                    | order? Yes                                   | No [   |                                       |                   |  |  |  |
| Person Notified:  | Date:  |  | 20.007                                |                   |  |  |  |
| By Whom:  | Via: 🗌 eM                                    | ail 🦳 Phone 🦳 F                                      | ax 🗌 In Person                        |                   |  |  |  |
| Regarding:  |  |  |                                       |                   |  |  |  |
| Client Instructions:  |  |  |                                       | 1                 |  |  |  |
| 16. Additional remarks:   |  | · · · · · · · · · · · · · · · · · · ·                |                                       |                   |  |  |  |
| 17. <u>Cooler Information</u><br>Cooler No Temp °C Condition Seal I<br>1 5.8 Good Yes     | ntact Seal No Seal D                         | ate Signed By  |                                       |                   |  |  |  |

Received by OCD: 6/8/2023 10:02:48 AM

|                  | <b>JENTAL</b>              |               | 4901 Hawkins NE - Albucueronie NM 87109        | Tel 505-345-3975 Fax 505-345-407 | Analysis Request  | ()<br>()<br>()<br>()<br>() | Rock is 1       | 2<br>2<br>2<br>3) s<br>((G<br>\$        | 2808<br>2002<br>2002<br>2002<br>2002<br>2002<br>2002<br>2002 | 0 □ 8<br>0 0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8<br>0 1 8 | The second secon |                                |                                  |                              |                           |                                | X                            |                                      | X 800-                       |                                 |                              |                                  |                       | Date Time Remarks: | Crysticer Date Time  |                  |
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|                  | <u>کې کې</u>               |               |  |                                  |                   |                            | 1208            | 3) s'                                   | LWB.   | E + -  | STEX + MTB   | 1<br>                          |                                  |                              |                           |                                |                              |                                      |                              |                                 |                              |                                  |                       |                    |                      |                  |
| lime:            | 48hrsa                     |               | ten  |                                  | ۍ.<br>کل، ک       | Li                         | Renard Rockierh |   |  | U<br>V   | ative H  | T4E -001                       | E00-                             | -003                         | -004                      | -005                           | 1010                         | LOU-                                 | -008                         | 600-                            | 019C                         |                                  | N 013                 | - Zhate Time       | (CAURCIER) Date Time | - ENH SHURS OGIS |
| I urn-Around Til | □ Standard                 | Project Name: | 21 vingston                                    | Project #:                       | 088210.35         | Project Manager:           | Recrard         | · • • • • • • • • • • • • • • • • • • • |  | On lee: X Yes  | Container Pr<br>Type and #   | 4250, Sar 3                    |                                  |                              |                           |                                |                              |                                      |                              |                                 |                              |                                  |                       | Received by:       | Received by          |                  |
| Record           | Client: GHD Services. Inc. |               | Mailing Address: 6121 Indian School Rolfre 200 | 211 LS WN                        | 0672              | . Bochisch oghd. com       | )               | Level 4 (Full Validation)               |  |  | Sample Request ID  | S: 082410.35, 031218. ME-TP-31 | 5688210:35" 08121 8. M. 67 P. 32 | 55-97-3 M. 812150 25-97880,5 | S'OSSUD 35, CSIDIS'NGTP34 | 26 98240-35-031318, M.6-TP. 35 | 2.088310:35.02131 3.ME-TP-36 | 5 '55' 27. JM. 8 18150, 35. 01285, 2 | 52,012,9W/810/50,55,010890,5 | 5.088210.38.0318.0018.0019.56.1 | 5.088,410.35,051348,446.5P.3 | 5: Dostor35:00131 2: M. 6. 59. 3 | 496-35-081318-M6-56-4 |                    | ped by:              |                  |
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| -uier            | -ADS                       |               | ddress;  | DUN VE                           | 56S               | -ax#: 8e                   | ickage:         | ard                                     | tion د   | Tvne)  | <del> </del>   | 430                            | 171P                             | いい                           | 1215                      | 1217                           | 1220                         | 222                                  | 1225                         | 1221                            | 1230                         | 1232                             | 1235                  |                    |                      | Å                |
| ົວ               | $Client:_{\sub}$           |               | Mailing A                                      | NEAL                             | Phone #: 505 \$84 | email or Fax#: Bernord     | QA/QC Package:  | □ Standard                              | Accreditation  |  | Date   | 3/12/18/1430                   | 3/13/18/1                        |                              |                           |                                |                              |                                      |                              |                                 |                              |                                  |                       | Late: Tir          | <u>-⊫</u><br>9       | Hisler 1         |

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# Attachment 3 Work Plan Approvals

| From:    | Bratcher, Mike, EMNRD   |
|----------|---|
| То:      | Alan Brandon; Weaver, Crystal, EMNRD; stucker@blm.gov; YJORDAN@BLM.GOV                  |
| Cc:      | Zane Kurtz; Bernard Bockisch; cctofiling@craworld.com                                   |
| Subject: | RE: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR-088210-35~ |
| Date:    | Tuesday, November 28, 2017 9:42:27 AM   |

RE: 2RP-2044

Alan,

Sorry for the delayed response. OCD would request that liner placement/installation be performed in a manner that will be as protective as possible, while making safety working around the gas line a priority. OCD will evaluate closure documentation and may request to discuss some type of long term monitoring for this site. This is a Federal site, so BLM will need to be on board with remediation proposals and any surface disturbance.

If you have any questions or concerns, please contact me.

Thank you,

Mike Bratcher NMOCD District 2 811 South First Street Artesia, NM 88210 575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Alan.Brandon@ghd.com [mailto:Alan.Brandon@ghd.com]
Sent: Tuesday, October 31, 2017 8:17 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD
<Crystal.Weaver@state.nm.us>; stucker@blm.gov; YJORDAN@BLM.GOV
Cc: Zane Kurtz <Zane\_Kurtz@eogresources.com>; Bernard.Bockisch@ghd.com;
cctofiling@craworld.com
Subject: RE: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR088210-35~

#### Mike,

After plotting the 24-inch gas line on our attached Figure 2, it does look like we will be excavating near the line. We will only excavate to within ten feet of the gas line and place the liner before backfilling. Please let us know if this is acceptable.

From: Bratcher, Mike, EMNRD [mailto:mike.bratcher@state.nm.us]
Sent: Wednesday, October 25, 2017 11:27 AM
To: Alan Brandon <<u>Alan.Brandon@ghd.com</u>>; Weaver, Crystal, EMNRD
<<u>Crystal.Weaver@state.nm.us</u>>; stucker@blm.gov; YJORDAN@BLM.GOV
Cc: Zane Kurtz <<u>Zane\_Kurtz@eogresources.com</u>>; Bernard Bockisch <<u>Bernard.Bockisch@ghd.com</u>>;
cctofiling@craworld.com
Subject: RE: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR-

RE: EOG Resources \* Livingston Ridge SWD Water Line \* 2RP-2044 \* DOR: 10/27/13

Greetings,

088210-35~

At the time of this release, Transwestern had a 24" high pressure gas line that this release followed. The line was fairly shallow, and actually exposed in some areas of the release. The proposal is for a 4' excavation and liner placement, but no mention of the gas line. Assuming it still exists, what is your proposal in regard to that line?

Thank you,

Mike Bratcher NMOCD District 2 811 South First Street Artesia, NM 88210 575-748-1283 Ext 108

From: Alan.Brandon@ghd.com [mailto:Alan.Brandon@ghd.com]
Sent: Tuesday, October 17, 2017 9:27 AM
To: Weaver, Crystal, EMNRD <<u>Crystal.Weaver@state.nm.us</u>>; Bratcher, Mike, EMNRD
<<u>mike.bratcher@state.nm.us</u>>; stucker@blm.gov
Cc: Zane Kurtz <<u>Zane\_Kurtz@eogresources.com</u>>; Bernard.Bockisch@ghd.com;
cctofiling@craworld.com
Subject: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR-088210-35~

Crystal, Mike and Shelly,

On behalf of EOG Resources, GHD is submitting the attached Assessment Summary Report for the Livingston Ridge SWD site (2RP-2044) for your review. If you have any questions, please contact either Bernard Bockisch or myself.

Thank you.

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| From:    | Tucker, Shelly   |
|----------|--|
| To:      | Bratcher, Mike, EMNRD  |
| Cc:      | <u>Alan Brandon; Weaver, Crystal, EMNRD; YJORDAN@BLM.GOV; Zane Kurtz; Bernard Bockisch;</u><br>cctofiling@craworld.com |
| Subject: | Re: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR-088210-35~                                |
| Date:    | Friday, January 19, 2018 11:18:14 AM   |

### BLM concurs with NMOCD approval and stipulations,

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist O&G Spill/Release Coordinator

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

575.234.5905 - Direct 575.361.0084 - Cellular 575.234.6235 - Emergency Spill Number

stucker@blm.gov

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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On Tue, Nov 28, 2017 at 9:42 AM, Bratcher, Mike, EMNRD <<u>mike.bratcher@state.nm.us</u>> wrote:

RE: 2RP-2044

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Sorry for the delayed response. OCD would request that liner placement/installation be performed in a manner that will be as protective as possible, while making safety working around the gas line a priority. OCD will evaluate closure documentation and may request to discuss some type of long term monitoring for this site. This is a Federal site, so BLM will need to be on board with remediation proposals and any surface disturbance.

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Thank you,

Mike Bratcher

NMOCD District 2

811 South First Street

<u>Artesia, NM 88210</u>

575~748~1283 Ext 108

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<<u>Crystal.Weaver@state.nm.us</u>>; <u>stucker@blm.gov</u>; <u>YJORDAN@BLM.GOV</u>
Cc: Zane Kurtz <<u>Zane\_Kurtz@eogresources.com</u>>; <u>Bernard.Bockisch@ghd.com</u>;
cctofiling@craworld.com

Subject: RE: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR-088210-35~

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Cc: Zane Kurtz <<u>Zane\_Kurtz@eogresources.com</u>>; Bernard Bockisch
<<u>Bernard.Bockisch@ghd.com</u>>; cctofiling@craworld.com
Subject: RE: 088210-35-(2RP-2044) Livingston Ridge SWD Assessment Summary Report ~COR-088210-35~

RE: EOG Resources \* Livingston Ridge SWD Water Line \* 2RP-2044 \* DOR: 10/27/13

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Thank you,

Mike Bratcher

NMOCD District 2

811 South First Street

Artesia, NM 88210

575~748~1283 Ext 108

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Crystal, Mike and Shelly,

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Thank you.

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# Attachment 4 Photo Log

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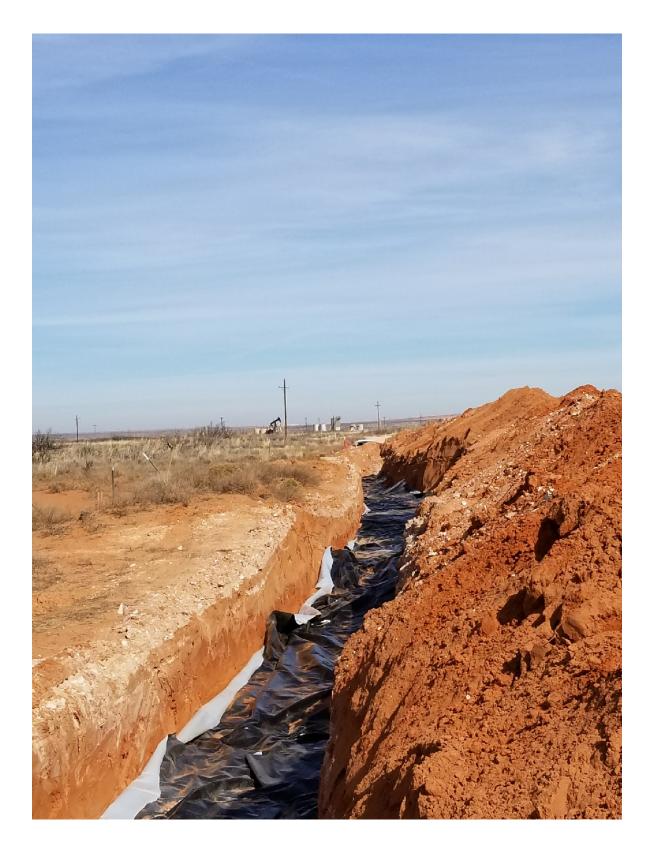


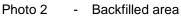
Photo 1 - Liner Placement



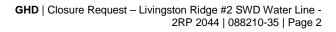
## Site Photographs

GHD | Closure Request – Livingston Ridge #2 SWD Water Line -2RP 2044 | 088210-35 | Page 1











## Attachment 5 Final C-141

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| Page | <i>134</i> | of | <i>136</i> |
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| 1301 W. Grand Avene, Amer., NM 8210       Dill Conservation Division       NMOCD ARTESMA: course of the inservation Division         2020 St. Francis Dr., Savar Fe, MM 87505       Santa Fe, NM 87505       Santa Fe, NM 87505         2020 St. Francis Dr., Savar Fe, MM 87507       Conservation Division       Dill Conservation Division         Name of Company       OPERATOR       Dinitial Report       Final Fe, NM 87505         Name of Company       OPERATOR       Dinitial Report       Final Fe, NM 87505         Name of Company       OPERATOR       Dinitial Report       Final Fe, NM 87505         Name of Company       OPERATOR       Dinitial Report       Final Fe, NM 87505         Yases Ferrolean Corporation       25575       Amber Cannon       Telephone No.       557-4851471         Facility Name       API Number       Facility Type       Ficow Ince       N/A         Livingston Ridge SWD Water Line       Nin       N/A       N/A       N/A         Livingston Ridge SWD Water Line       Nin       N/A       N/A       Eddy         Livingston Ridge SWD Water Line       Nin       N/A       N/A       Eddy         Surface Owner       Township Range       Feetron the Feetrow the Feetrow the Feetrow the Feetrow the East No.       N/A         Living Control Ridge SWD Water Line       N/A   | 1625 N. French Dr., Hobbs, NM 88240  |   |  | NOV 05 2   | 013 Form C-14<br>Revised October 10, 20  |
| Data St. Primes Dr., Sanza Fe, NM 87305     1220 South St. Francis Dr., Sanza Fe, NM 87305     with Rule 10.6     side t       Starta Fe, NM 87305     Castra Fe, NM 87305     side t       Starta Fe, NM 87305     Contact     Initial Report     Final       Name of Company     ORID Number     Initial Report     Final       Yates Petroleann Corporation     25575     Amber Comanon     Amber Comanon       Yates Petroleann Corporation     25575     Amber Comanon     Final       Jos Aff "Street     575.748-1471     Final     Final       Facility Name     API Number     Fellity Type     N/A       Livingston Ridge SWD Water Line     NA     Focdata     N/A       Sturface Owner     Federal     Federal     County       NA     1228     St. Finance SD.     N/A       NA     1228     St. Finance SD.     N/A       NA     1228     St. Finance SD.     N/A       Value of Release     Date and Hone of Discovery     N/A       Value of Release     Date and Hone of Discovery     1027/2013; PM       Date and Hone of Occurrence     N/A     N/A       Wast Intradiate NoteC Given?     N/A     N/A       Wast Intradiate NoteC Given?     N/A     1027/2013; PM       Wast Intradiate NoteC Given?     N/A   | 1301 W. Grand Avenue, Artesia, NM 88210  |   |  |  | 8  |
| 1280 5 M Prancis Dr., Sunta Fe, NM 87505       Santa Fe, NM 87505       side f         Release Notification and Corrective Action         Name of Company       OGRID Number       Contact       Initial Report       Final I         Yates Petroleum Corporation       25375       Amber Cannon       Address         105 S. 4 <sup>44</sup> Street       575-748-1471       Facility Name       Facility Name         Livingston Ridge SWD Water Line       NA       Facility Name       NA         Surface Owner       Mineral Owner       Federal       Lease No.         Federal       NA       Federal       NA         Unit Letter       Section       Township       Range       NA         NA       100CATION OF RELEASE       NA       Country         NA       11       Country       NA       Eddy         NA       1225       128       Feed from the NA       NA       Eddy         Value       Valuer of Release       Volume Recovered       3000 B/PW, 30 B/O       480 B/PW, 30 B/O         Value and Aber/Yates Petroleum Corporation       WA       IYZES, To Whom?       Water rander line       Water Sector PWW 200 PC         Water ander die       3200 B/PW, 50 B/O       Date and Hour of Discovery       Water rander line   | 1000 Rio Brazos Road, Aztec, NM 87410  |   |  |  | District Office in accordan<br>with Rule 116 on ba   |
| Name of Company       OPERATOR       Initial Report       Final I         Name of Company       OGRID Number       Contact       Amber Cannon         Address       Telephone No.       557.5       Amber Cannon         Totes Petrolocum Corporation       API Number       Telephone No.       557.5-748.1471         Facility Name       API Number       Facility Type       Flow line         Surface Owner       Mineral Owner       Flow line       N/A         Federal       N/A       Elow line       N/A         Unit Letter       Section       Township       Range       Control ON OF RELEASE         Unit Letter       Section       Township       Range       Forthorn the Owner/South Line       Fast/West Line       Country         N/A       1228       BIE       Forthorn the Owner/South Line       Fast/West Line       Country       N/A         N/A       1220       BPW, 50 BO       Souteme of Release       Date and Hour of Ocurrence       Date and Hour of Discovery         Waster marker line       10/27/2013; PM       10/27/2013; PM       10/27/2013; PM         Waster marker line       Yes       No       Nost Required       Mike Bratcher/MOCD II         By Wom?       No       Nost Required       Mike Brat  |  |   |  |  | side of for  |
| Name of Company       OGRID Number       Contact         Andress       Tolephone No.         105 S. 4 <sup>TH</sup> Street       575-748-1471         Facility Name       API Number       Facility Type         Facility Name       API Number       Facility Type         Facility Name       API Number       Facility Type         Facility Name       Mineral Owner       Icase No.         Federal       Pederal       N/A         Unit Letter       Section       Township       Range         Yee of Release       Yolume Control       N/A       Eddy         Volume Control       Release       Yolume Control       BPFW, 50 B/O       480 BPW, 50 B/O         Yee of Release       Yolume Control       Release       Yolume Of Release       Yolume Of Release       Yolume Of Release       Yolume Of Release       Yolume Of Release       Yolume Of Release       Yolume Of Discovery         Water manafer line       Yes       No       Not Required       Mike Bratcher/NMCDD II       Dyrac and Hour Of Discovery         Water manafer line       Yes       No       Not Required       N/A       N/A       Street         By Whom?       Yes       No       Not Required       N/A       N/A       Street       Street   | F) ( H   | Release Notification  | on and Correctiv   | ve Action  |  |
| Yates Perioleum Corporation       25575       Amber Cannon         Address       Telephone No.         Strated       API Number       Facility Type         Flyingston Ridge SWD Water Line       API Number       Facility Type         Surface Owner       Mineral Owner       INA         Federal       Economic No.       NA         Surface Owner       Mineral Owner       INA         Federal       Economic No.       NA         Unit Letter       Section       Township       Range         Yolk       Township       Range       Feet from the       NA         NA       NA       NA       NA       Eday         NATURE OF RELEASE       Volume Recovered       Date and Hour of Occurrence       Date and Hour of Discovery         Yeas Immediate Notice Given?       Yes       No       No Requered       Mike Bracheer/MNOCD II         By Whon?       Rese       No       No Requered       Nice Bracheer/MOCD II       Date and Hour         Robert Asher Yates Pertoleum Corporation       Yes No       Inter Cale and Provide oil. AND Requered       Nice Bracheer/MOCD II         By Whon?       Robert Asher Yates Pertoleum Corporation       Date and Hour       IO2272013; PM       INZ272013; PM       INZ272013; PM       <   |  | 3OPER   | · · · · · · · · · · · · · · · · · · ·  | 🛛 Initi  | al Report 🔲 Final Repo   |
| Address       Telephone No.         19S S. 4 <sup>11</sup> Street       S75-748-1471         Facility Name       API Number         Facility Name       Mineral Owner         Facility Type       Federal         Surface Owner       Mineral Owner         Federal       Mineral Owner         Federal       LocATION OF RELEASE         Unit Letter       Section         N/A       1         Zas       31E         N/A       N/A         N/A       N/A         Value       Section         N/A       102 CATION OF RELEASE         Unit Letter       Section         Type of Release       Volume of Release         Produced water and crude oil       3200 B/W, 50 B/O         Source of Release       Date and Hour of Occurrence         Date and Hour of Occurrence       102 27/2013; PM         Was Immediate Notice Given?       Yes         Was a Watercourse Reached?       Yes         Yes       No         No       No Required         M'Yes & Watercourse Reached?       Yes         Yes       No         N/A       N/A         By Whon?       Robert AsherYates Petroleam Coporation   |  |   |  |  |  |
| Facility Name       API Number       Facility Type         Livingston Ridge SWD Water Line       N/A       Flow line         Surface Owner       Mineral Owner       Lease No.         Federal       Mineral Owner       Lease No.         Federal       N/A       N/A         LocArtION OF RELEASE         Unit Letter       Section       Township       Range       Feet from the       N/A       N/A         NAT URE OF RELEASE         Unit Letter       Section       County       N/A       N/A       N/A         Volume Cor Release         Produced water and crude oil       3200 MPW, 30 B/O       480 MPW, 30 B/O       480 MPW, 30 B/O         Source of Release       Date and Hour of Occurrence       N/A         Was Immediate Notice Given?       If YES, Yo Winton?       Mike Entecher/NMCCD II       By Whon?         Robert Aber/Yates Petroleum Corporation       10/28/2013; A/M       If YES, Yo Winton?       N/A         Was a Watercourse was Impacted, Describe Fully.*       N/A       N/A       If YES, Volume Impacting the Water Disposals in the area) naptured, spilling produced water and crude oil. All batterists that tied into the water tint. Since the relea  | Address  |   | Telephone No.  |  |  |
| Livingston Ridge SWD Water Line       N/A       Flow line         Surface Owner<br>Federal       Mineral Owner<br>Federal       Lease No.<br>N/A         Locat TION OF RELEASE       Lease No.<br>N/A       N/A         Unit Letter       Section       Township       Range<br>31E       Feet from the<br>N/A       N/A       Ease No.<br>N/A         Unit Letter       228       31E       Feet from the<br>N/A       N/A       N/A       Eddy         Livitude       32.41751       Longitude 103.73427       NATURE OF RELEASE       Volume Recovered         Type of Release       Volum of Release       Volum of Release       Volume Recovered         Was Immediate Notice Given?       If YES, To Whom?       Not Required       Mike Bratcher/NMOCD II         By Whom?       Reserval and Hour of Occurrence       Date and Hour of Disovery       10/23/2013; AM         Yes       No       Not Required       Mike Bratcher/NMOCD II       10/23/2013; AM         By Whom?       Yes ⊠ No       If YES, Volume Impacting the Watercourse.       N/A         If a Watercourse was Impacted, Describe Folly.*       N/A       If YES, Volume Impacting the Watercourse.       N/A         Matercourse was impacted, Describe Folly.*       N/A       If YES, Volume Impacting the Watercourse.       N/A         Matercourse was impacted, D   |  | API Number  |  |  |  |
| Federal       N/A         LOCATION OF RELEASE         Unit Letter       Section       Township       Range       Feet from the       N/A       N/A       N/A       East/West Line       County         N/A       1       225       31E       Feet from the       N/A       N/A       N/A       East/West Line       County         N/A       1       225       31E       Volume of Release       Volume of Release       Volume Recovered       Produced water and crude oil       200 BPW, 50 BVO       480 BPW; 30 B/O         Source of Release       Date and Hour of Occurrence       Date and Hour of Decurrence       Date and Hour of Discovery       10/27/2013; PM         Was Inmediate Notice Given?       Mater transfer line       10/27/2013; PM       Mike Bratcher/NMOCD II       By Whom?         Robert Asher/Yates Petroleum Corporation       10/28/2013; AM       Mike a Watercourse Reached?       If YES, Volume Impacting the Watercourse.         If a Watercourse was Impacted, Describe Fully.*       N/A       N/A       N/A       Italial do to the water line. Since the release water line faing to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tiel into the water line kas a boben repleced.         Describe Cruse of Problem and Remedial Action Taken.*       A       A naproximate areare of 30' CO'. The r   |  |   |  | <u> </u>   |  |
| LOCATION OF RELEASE           Unit Letter<br>N/A         Township         Range<br>Statistic         Feet from the<br>N/A         Nonh/South Line<br>N/A         Feet from the<br>N/A         East/West Line<br>N/A         County<br>Eddy           Latitude _32.41751         Longitude _103.73427           NATURE OF RELEASE           Type of Release<br>Produced water and crude oil           Source of Release<br>Produced water and crude oil           Source of Release<br>Produced water and crude oil           Output of Release<br>Produced water and crude oil           Source of Release<br>Produced water and crude oil           Wollume of Release<br>Produced water and crude oil           Water transfer line           Was Immediate Notice Given?         If YES, To Whom?           Was a Watercourse Reached?         If YES, To Whom?           By Whom?         Date and Hour           Robert Asher/Yates Petroleum Corporation           10/27/2013; PM         If YES, To Whom?           Ma         Was a Watercourse Reached?         If YES, To Whom?           N/A         N/A         N/A           No           NA         If YES, To Whom?           N/A         Was a Watercourse Reached?         If YES, To Whom?   |  |   | •.   |  | No.  |
| Unit Letter<br>N/A       Section<br>1       Township<br>22S       Range<br>31E       Feet from the<br>N/A       North/South Line<br>N/A       Feet from the<br>N/A       East/West Line<br>N/A       County<br>Eddy         Latitude _32,41751       Longitude _103.73427         NATURE OF RELEASE         Type of Release       Volume of Release       Volume of Occurrence<br>1027,2013; PM       Volume of Occurrence<br>1027,2013; PM       Date and Hour of Discovery<br>1027,2013; PM         Was Immediate Notice Given?       Yes       No       No Required       Mike Bratcher/NMOCD II         By Whom?       Robert Asher/Yates Petroleum Corporation       10227,2013; PM       If YES, Volume Impacting the Watercourse.<br>N/A         If a Watercourse Reached?       Yes       No       Not Required       Mike Bratcher/NMOCD II         By Whom?       Robert Asher/Yates Petroleum Corporation       10/228/2013; AM       If YES, Volume Impacting the Watercourse.<br>N/A         If a Watercourse was Impacted, Describe Fully.*       NA       NA       Eddediate in the interior shall batteries that tied into the inter were shalt to Xouum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the release water line has also been replaced.         Describe Cause of Problem and Remedial Action Taken.*       A camany crew was called to do initial clean-up of the area, and all excavated solis are being disposed of an approved faciNNOCD facility. Verical delineatio  | Federal  | Federal   |  | N/A  |  |
| N/A       1       225       31Ē       N/A       N/A       N/A       N/A       N/A       N/A       KA         Latitude _32.41751       Longitude _103.73427         NATURE OF RELEASE         Type of Release       Volume Recovered       480 B/PW; 30 B/O         Source of Release       Date and Hour of Occurrence       Date and Hour of Discovery         Wast transfer line       10/27/2013; PM       10/27/2013; PM         Was Immediate Notice Given?       Yes       Not Required       Mike Bratcher/NMOCD II         By Whom?       Robert Asher/Yates Petroleum Corporation       10/28/2013; AM       10/28/2013; AM         Yas a Watercourse was Impacted, Describe Fully.*       N/A       N/A       N/A         Main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lawer shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the releas water line has also bear registed.         Describe Area Affected and Cleamp Action Taken.*       A clean-up crew was called to do initial clean-up of the area, and all eccavated soils are being disposed of at an approved faith work in release area. A clean-up crew was called to do initial clean-up of the area, and all eccavated soils are being disposed of at an approved faith WOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMOCD and   | Unit Latter Cratics Township Day   |   |  | the East/West Line   | County   |
| NATURE OF RELEASE         Type of Release       Volume of Release       Volume of Release       Volume of Quere of Release         Source of Release       Date and Hour of Occurrence       Date and Hour of Occurrence       Date and Hour of Occurrence         Was Immediate Notice Given?       If YES. To Whom?       Not Required       Mike Bratcher/NMOCD II         By Whom?       Date and Hour       Robert Asher/Yates Petroleum Corporation       10/23/2013; AM         Was a Watercourse Reached?       If YES. To Whom?       Not       Not         Mas a Watercourse was Impacted, Describe Fully.*       N/A       N/A         Describe Cause of Problem and Remedial Action Taken.*       N/A       N/A         A ana water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lawere shut in. Vacuum trucks were called to recover produced water and crude oil. All batteries that tied into the release water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*       A clean-up crew was called to do initial clean-up of the area, and all work will be provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fur or work will be determined and discussed with both agencics.         Describe Cause o  |  |   |  |  |  |
| Type of Release       Volume of Release       Volume Recovered         Produced water and crude oil       3200 B/PW, \$0 B/O       480 B/PW; 30 B/O         Source of Release       Date and Hour of Occurrence       International Hour of Discovery         Water transfer line       10/27/2013; PM       International Hour of Discovery         Was Immediate Notice Given?       If YES, To Whom?       Date and Hour         Robert Asher/Yates Petroleum Corporation       10/28/2013; AM       10/28/2013; AM         Was a Watercourse Reached?       If YES, Volume Impacting the Watercourse.       N/A         NA       Describe Cause of Problem and Remedial Action Taken.*         A main water line (soing to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lwere shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the releas water line has also been replaced.         Describe Area Affected and Clearup Action Taken.*       A naprovial MACOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water:>100 (approximately 100-125, Section 1, T22-SR31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body:>10002, SITE RANKING IS 0.         In berdby certify that the inform   |  | Latitude <u>32.41751</u>  | Longitude103.734   | 27   |  |
| Type of Release       Volume of Release       Volume Recovered         Produced water and crude oil       3200 B/PW, \$0 B/O       480 B/PW; 30 B/O         Source of Release       Date and Hour of Occurrence       International Hour of Discovery         Water transfer line       10/27/2013; PM       International Hour of Discovery         Was Immediate Notice Given?       If YES, To Whom?       Date and Hour         Robert Asher/Yates Petroleum Corporation       10/28/2013; AM       10/28/2013; AM         Was a Watercourse Reached?       If YES, Volume Impacting the Watercourse.       N/A         NA       Describe Cause of Problem and Remedial Action Taken.*         A main water line (soing to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lwere shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the releas water line has also been replaced.         Describe Area Affected and Clearup Action Taken.*       A naprovial MACOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water:>100 (approximately 100-125, Section 1, T22-SR31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body:>10002, SITE RANKING IS 0.         In berdby certify that the inform   |  | NATUR   | E OF RELEASE   |  |  |
| Source of Release       Date and Hour of Occurrence       Date and Hour of Discovery         Water transfer line       10/27/2013; PM       10/27/2013; PM         Was Immediate Notice Given?       If YES, To Whom?       Mike Bratcher/NMOCD II         By Whom?       Date and Hour       10/27/2013; AM         Robert Asher/Yates Petroleum Corporation       10/28/2013; AM         Was a Watercourse Reached?       If YES, Volume Impacting the Watercourse.         N/A       N/A         Describe Cause of Problem and Remedial Action Taken.*       N/A         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the I were shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the release water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*       A         An approximate area of 50' X 600'. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all excavated soils are being disposed of at an approved NMOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Wa   |  |   | Volume of Release  |  |  |
| Was Immediate Notice Given?       Yes       No       Not Required       If YES, To Whom?         Mike Bratcher/NMOCD II       Date and Hour       10/28/2013; AM       If VES, To Whom?         Robert Asher/Yates Petroleum Corporation       10/28/2013; AM       If YES, Volume Impacting the Watercourse.         Mass a Watercourse Reached?       If YES, Volume Impacting the Watercourse.       N/A         Describe Cause of Problem and Remedial Action Taken.*       NA         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lewer shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the releas water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*       A approximate area of 50' K 600'. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi         GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all opproved faility to be analyzed. As soon as Yats receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies.         Cherron Trend Map, Wellhead Protection Arra: No, Distance to Surface Water Body: SITE RANKING IS 0.         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 an   |  |   |  |  |  |
| Yes       No       Not Required       Mike Bratcher/NMOCD II         By Whom?       Date and Hour       10/28/2013; AM         Robert Asher/Yates Petroleum Corporation       10/28/2013; AM         Was a Watercourse Reached?       If YES_Volume Impacting the Watercourse.         N/A       N/A         Part and Hour       10/28/2013; AM         Was a Watercourse Reached?       If YES_Volume Impacting the Watercourse.         N/A       N/A         Privation of the Amendial Action Taken.*       A         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lawere shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the release water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*       A approximate area of 50' X 600'. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi GPS points provided above were taken at an electrical pool near the release area. A clead and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water: >100' (approximate) 100-125', Section 1, T22S-R31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0.         I hereby certify that the information giv   | ······   |   |  | 10/27/20   | 113; PM  |
| Robert Asher/Yates Petroleum Corporation       10/28/2013; AM         Was a Watercourse Reached?       If YES, Volume Impacting the Watercourse.         N/A       If a Watercourse was Impacted, Describe Fully.*         N/A       Describe Cause of Problem and Remedial Action Taken.*         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the water line is also been replaced.         Describe Area Affected and Cleanup Action Taken.*         A napproximate area of 50° X 600°. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all excavated soils are being disposed of at an approved NMOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water: >100° (approximately 100-125°, Section 1, T22S-R31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body: >1000°, SITE RANKING IS 0.         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 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 liabibilit should their operations have failed t  |  | No Not Require  |  | DII  |  |
| Was a Watercourse Reached?       If YES, Volume Impacting the Watercourse.         N/A       N/A         Describe Cause of Problem and Remedial Action Taken.*         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lever shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the releax water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*         An approximate area of 50° X 600°. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all excavated soils are being disposed of at an approved NMOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water: >100° (approximately 100-125°, Section 1, T22S-R31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body: >1000°, SITE RANKING IS 0.         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 t  |  |   |  |  |  |
| If a Watercourse was Impacted, Describe Fully.*         N/A         Describe Cause of Problem and Remedial Action Taken.*         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the were shut in. Vacuum trucks were called to recover produced water and crude oil. Roustabouts were also called to fix the water line. Since the releax water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*         An approximate area of 50° X 600°. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all excavated soils are being disposed of at an approved NMOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water: >100° (approximately 100-125', Section 1, T22S-R31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0.         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. In addition, NMOCD acceptance of a C-141 report by the NMOCD marked as "Final Report" does not reliever the operator of responsibility for compli  | Was a Watercourse Reached?   |   | If YES, Volume Impac   | cting the Watercourse.   |  |
| N/A         Describe Cause of Problem and Remedial Action Taken.*         A main water line (going to multiple Salt Water Disposals in the area) ruptured, spilling produced water and crude oil. All batteries that tied into the lawater line. Since the release water line has also been replaced.         Describe Area Affected and Cleanup Action Taken.*         An approximate area of 50' X 600'. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all excavated soils are being disposed of at an approved NMOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMO approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu work will be determined and discussed with both agencies. Depth to Ground Water: >100' (approximately 100-125', Section 1, T22S-R31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0.         1 hcreby 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 responsibility for compliance with any other federal, state, or local laws and/or regulations.         Signature:       OIL CONSERVATION DIVISION         Approved by District Super   |  |   | N/A  |  |  |
| Describe Area Affected and Cleanup Action Taken.*         An approximate area of 50' X 600'. The release occurred in a pasture between two Oxy locations (Federal 1 #1 and Federal 1 #6). The latitude/longi         GPS points provided above were taken at an electrical pool near the release area. A clean-up crew was called to do initial clean-up of the area, and all         excavated soils are being disposed of at an approved NMOCD facility. Vertical delineation samples were taken 11/4/2013 and will be sent to a NMOC approved facility to be analyzed. As soon as Yates receives analytical results from the laboratory, they will be provided to NMOCD and BLM and fu         work will be determined and discussed with both agencies.       Depth to Ground Water: >100' (approximately 100-125', Section 1, T22S-R31E, per Chevron Trend Map, Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0.         1 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 head 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.         Signature:       OIL CONSERVATION DIVISION         Napproved by District Sup  | Describe Cause of Problem and Remedial A<br>A main water line (going to multiple Salt W<br>were shut in. Vacuum trucks were called to  | ater Disposals in the area) ru  |  |  |  |
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| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to 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 here 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.         Signature:       OIL CONSERVATION DIVISION         Printed Name: Amber Cannon       Approved by District Supervisor Signed By         Title: Environmental Regulatory Agent       Approval Date:       0 5 2013         Expiration Date:       Expiration Date:   | An approximate area of 50' X 600'. The rel<br>GPS points provided above were taken at an<br>excavated soils are being disposed of at an a<br>approved facility to be analyzed. As soon as  | ease occurred in a pasture b<br>electrical pool near the rele<br>pproved NMOCD facility.<br>s Yates receives analytical re                                      | ase area. A clean-up crew<br>Vertical delineation sample<br>sults from the laboratory, t                           | was called to do initial<br>es were taken 11/4/2013<br>they will be provided to                              | clean-up of the area, and all<br>and will be sent to a NMOCD<br>NMOCD and BLM and further                                |
| Signature:       OIL CONSERVATION DIVISION         Signature:       Approved by District Supervisor Signed By         Printed Name:       Approved by District Supervisor Signed By         Title:       Environmental Regulatory Agent         Environmental Regulatory Agent       Approval Date:  | I hereby certify that the information given all<br>regulations all operators are required to repo-<br>public health or the environment. The accep-<br>should their operations have failed to adequa<br>or the environment. In addition, NMOCD ad | bove is true and complete to<br>rt and/or file certain release<br>stance of a C-141 report by t<br>ately investigate and remedia<br>cceptance of a C-141 report | the best of my knowledge<br>notifications and perform of<br>the NMOCD marked as "Fi<br>ate contamination that pose | and understand that pur<br>corrective actions for rel<br>nal Report" does not rel<br>a threat to ground wate | suant to NMOCD rules and<br>eases which may endanger<br>ieve the operator of liability<br>r, surface water, human health |
| Printed Name: Amber Cannon       Approved by District SupervisorSigned By       Mile       Brance         Title: Environmental Regulatory Agent       Approval Date:       0 5 2013       Expiration Date:   |  |   | <u>OIL C</u>   | ONSERVATION  | DIVISION   |
| Title: Environmental Regulatory Agent Approval Date: 0 5 2013 Expiration Date:   |  | <u>^</u>  | Americal Inc. D. 1.1.1.0   |  | II K   |
| Approval Date.   | Signature: UMDU UMM  |   | Approved by District Sup   | Signed By 7  | A. U.S. A. Jakes J. Sta  |
|  |  |   |  |  | 1119 DAMIDUCE  |
| E-mail Address: acannon@yatespetroleum.com Conditions of Approval: Remediation per OCD Rule & Guidelines, & Attached   | Printed Name: Amber Cannon   |   |  | 2012   |  |
| Date: Tuesday, November 05, 2013 Phone: 575-748-4111 like approval by BLM. SUBMIT REMEDIATION  | Printed Name: Amber Cannon<br>Title: Environmental Regulatory Agent  | om  | Approval Date: 0 5   | 2013 Expiration  | Date:  |
| Attach Additional Sheets If Necessary<br>FJMW 1330950158<br>Dec. 5,2013<br>2RP-20  | Printed Name: Amber Cannon<br>Title: Environmental Regulatory Agent<br>E-mail Address: acannon@yatespetroleum.c<br>Date: Tuesday, November 05, 2013  | Rei   | Approval Date: 05<br>Conditions of Approval:<br>nediation per OCD Rule<br>approval by BLM. <u>SUBM</u>             | 2013 Expiration<br>& Guidelines, &<br>IIT REMEDIATION  | Date:  |

Page 6

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2044 |
| Facility ID    |          |
| Application ID |          |

## Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report. A scaled site and sampling diagram as described in 19.15.29.11 NMAC Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Title: Environmental Supervisor Printed Name: James Kennedy Signature: \_\_\_\_\_\_ *F Kennedy*\_\_\_\_\_\_ email: james\_kennedy@eogresources.com Date: 04/15/2019 Telephone: 432-848-9146 **OCD Only** Received by: <u>Jocelyn Harimon</u> Date: 06/29/2023 Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations. 07/07/2023 Closure Approved by: Date: Printed Name: Jocelyn Harimon Title: Environmental Specialist

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

| Operator: (       | OGRID:                                    |
|-------------------|---|
| EOG RESOURCES INC | 7377                                      |
| P.O. Box 2267     | Action Number:                            |
| Midland, TX 79702 | 225431                                    |
|                   | Action Type:                              |
|                   | [C-141] Release Corrective Action (C-141) |
|                   |   |

#### CONDITIONS

| Created By | Condition | Condition<br>Date |
|------------|-----------|-------------------|
| jharimon   | None      | 7/7/2023          |

Action 225431