# L Peter Galusky, Jr PE

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April 1<sup>st</sup>, 2020

# **Bradford Billings**

New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

Re: **2019 Annual Report** Rice Operating Company – Vacuum SWD System **Vacuum F-34 Vent Boot** UL F, Section 34, Township 17S, Range 35E NMOCD Case Number 1R425-67

Sent via E-mail

# Mr. Billings:

This Annual Report is submitted to NMOCD for Rice Operating Company's (ROC) Vacuum F-34 Vent Boot project in Lea County, New Mexico.

# Background and Brief Project History

The site is located approximately 2.5 miles east-southeast of Buckeye, New Mexico (Appendix Figure 1). The regional topography slopes gently toward the southeast. Groundwater is encountered at a depth of approximately 70 ft below ground surface in the Ogallala Formation.

The junction box at this location was removed during the Vacuum SWD system abandonment and conducted an initial soils evaluation in 2008. The results of an NMOCD approved Investigation and Characterization Plan (ICP) indicated elevated levels of soil and groundwater chlorides, and a Notification of Groundwater Impact was submitted to NMOCD on October 26<sup>th</sup>, 2010. ROC installed a double synthetic subsurface soil liner and completed surface restoration in May 2011 and NMOCD granted vadose zone remediation termination status, or 'soil closure,' on September 15<sup>th</sup>, 2011. A Project Update was submitted to NMOCD on August 8<sup>th</sup>, 2013 which proposed continued groundwater monitoring and limited groundwater withdrawal from the near-source well (MW-1) to determine if this would effectively reduce groundwater chloride mass. NMOCD approved this work in August 13<sup>th</sup>, 2013. Monitor well locations are shown in the Appendix Figure 2.

# Past Year and Current Status

ROC began groundwater recovery from MW-1 in April of 2014. A total of 12,107 bbls of groundwater and approximately 965 kg of chloride have been removed since pumping began

## Rice Operating Company - Vacuum F-34 Vent Boot Annual Report

through October 2019 when the system was shut down for winter. The removed groundwater was hauled to off-site locations for beneficial use.

Groundwater withdrawals have contributed to a substantial reduction in near-source groundwater chloride concentrations, as these have dropped in the near-source monitor well (MW-1) from an average of 865 mg/l in 2014 to 381 mg/l in 2019 ... a 56% decrease (Appendix Figure 3, Table 1). This also suggests that the mass of chlorides in the groundwater is sufficiently small that natural dilution and limited pumping can reduce their concentration.

Chlorides in the up-gradient monitor well (MW-2) remained below 100 mg/l as they mostly have from 2011 through 2019 (Appendix Figure 3, Table 2).

BTEX has remained below laboratory detection levels in both up-gradient and near-source monitor wells as it has since sampling began (Appendix Tables 1&2).

Given that BTEX concentrations have been below detectable limits since installation, ROC requests to suspend BTEX sampling in both wells (MW-1 and MW-2) in 2020. Further, due to the current climate, and in the interest of safety, ROC proposes to reduce groundwater monitoring from quarterly to semi-annually for the remainder of this year. In addition, ROC is proposing to suspend groundwater recovery for this year. These proposals are only temporary and regularly scheduled groundwater monitoring and recovery will commence as soon as possible.

ROC is the service provider (agent) for the Vacuum Saltwater Disposal (SWD) System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis. The Vacuum SWD system is now abandoned. We thus submit this report for your review and consideration.

Please contact either myself or Katie Jones Davis at Rice Operating Company if you have any questions or need additional information.

Thank you.

Sincerely,

L. Peter (Pete) Galusky, Jr PE

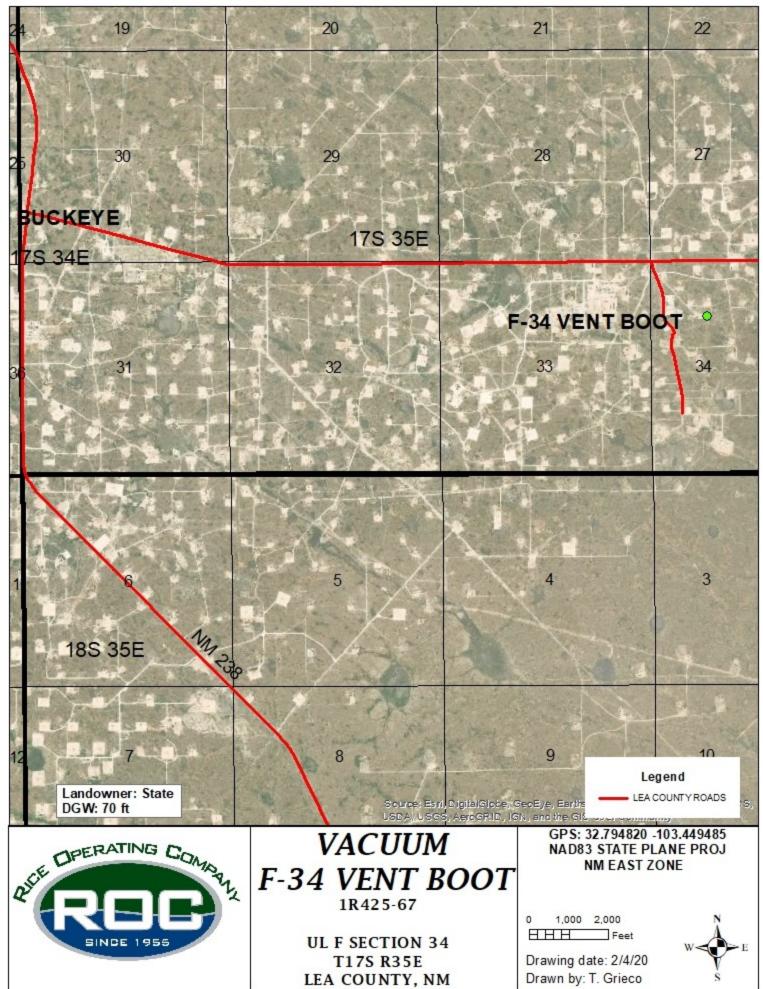
Copy: Rice Operating Company Attachments: ... as noted in text



## L Peter Galusky, Jr PE

Geographic Location

FIGURE 1



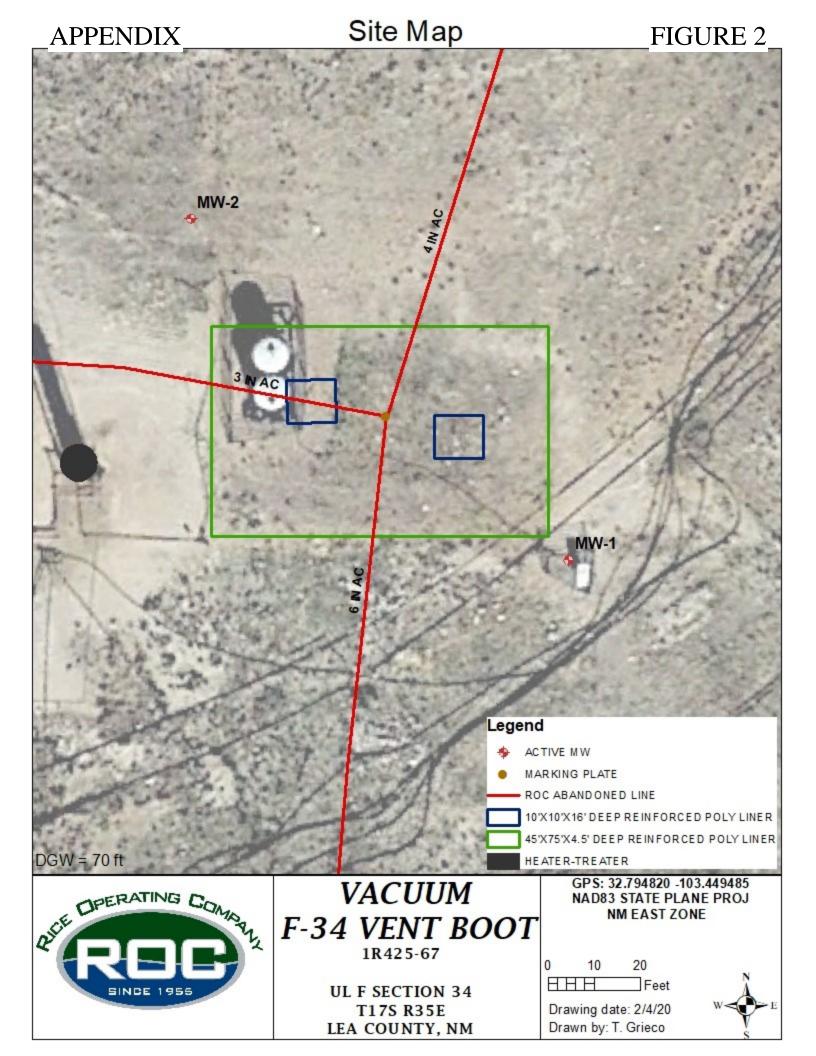
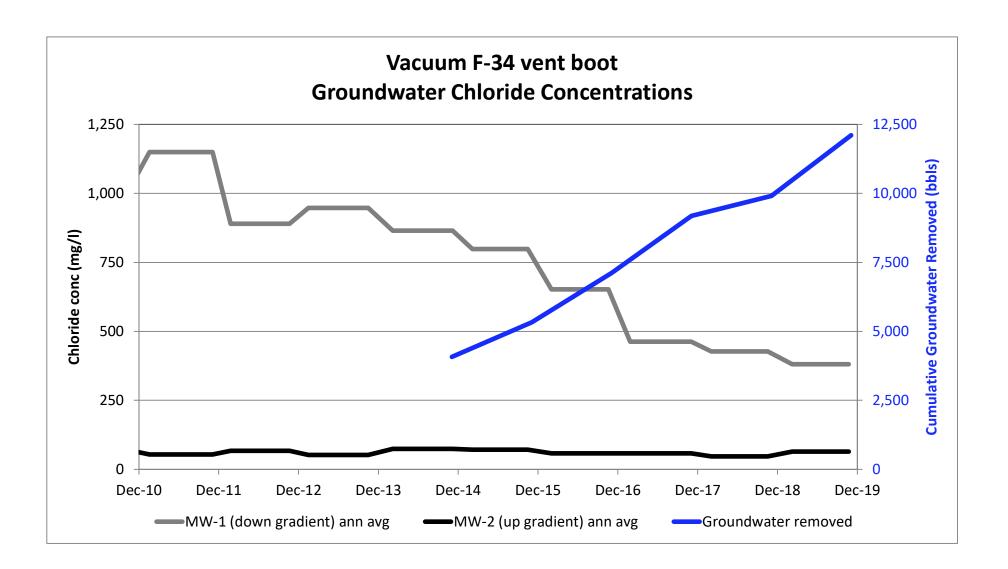


FIGURE 3



## Table 1 - MW-1 (down-gradient) groundwater data (concentrations in mg/l)

|       |                   | laomi          | Bruarcing | SIGUIUM | alei uala (COI | iccitte |               | 1116/1/ |         |         |                  |                  |         |               |
|-------|-------------------|----------------|-----------|---------|----------------|---------|---------------|---------|---------|---------|------------------|------------------|---------|---------------|
|       | Donth to          | Total          | Mall      | Valuma  |                |         |               |         |         |         | E+b.d            | Total            |         |               |
| мw    | Depth to<br>Water | Total<br>Depth |           | Volume  | Sample Date    |         | ann<br>avg Cl | TDS     | Benzene | Toluene | Ethyl<br>Benzene | Total<br>Xylonos | Sulfato | Comments      |
| 10100 | 69.9              | 118.4          | 31.5      | 100     | 5/28/2010      |         | 983           | 2,030   | < 0.001 | <0.001  | < 0.001          | <0.003           |         | Clear no odor |
| 1     | 69.7              | 118.4          | 31.5      | 100     | 7/27/2010      |         |               | 2,030   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 69.8              | 118.4          | 31.6      | 100     | 10/27/2010     |         |               | 2,130   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 69.9              | 118.4          | 31.5      | 100     | 2/18/2011      |         |               |         | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.1              | 118.4          | 31.3      | 100     | 6/3/2011       |         |               |         | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.1              | 118.4          | 31.4      | 100     | 9/1/2011       | ,       | ,             | 2,100   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         |               |
| 1     | 70.1              | 118.4          | 31.4      | 100     | 12/3/2011      | -       |               |         | < 0.001 | <0.001  | <0.001           | < 0.003          |         | Clear no odor |
| 1     | 70.1              | 118.4          | 31.4      | 100     | 2/23/2011      | · ·     | 890           |         | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.2              | 118.4          | 31.3      | 100     | 5/31/2012      | 930     | 890           |         | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.3              | 118.4          | 31.3      | 100     | 8/24/2012      | 980     | 890           | 2,150   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.0              | 118.4          | 31.4      | 100     | 11/19/2012     | 590     | 890           |         | <0.001  | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.1              | 118.4          | 31.4      | 100     | 2/13/2012      | 960     | 948           | 1,990   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.2              | 118.4          | 31.3      | 100     | 5/29/2013      |         | 948           | 2,320   | <0.001  | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.8              | 118.4          | 30.9      | 100     | 9/5/2013       | 920     | 948           | 2,320   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | 100     |                | 890     | 948           | 2,040   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 3/6/2014       |         | 865           | 2,040   | <0.001  | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | running | 6/4/2014       | 769     | 865           | 1,490   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | running | 8/23/2014      | 630     | 865           | 1,570   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 12/4/2014      |         | 865           | 2,170   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 3/5/2015       | 810     | 798           | 1,850   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | running | 6/4/2015       |         | 798           | 1,140   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | 70.6              | 118.4          | 31        | 100     | 8/24/2015      |         | 798           | 1,950   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | 0         | 200     |                | 890     | 798           | 1,770   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear no odor |
| 1     | XXX               | 118.4          | XXX       | 200     | 2/29/2016      |         | 653           | 1,700   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 200     | 5/20/2016      |         | 653           | 1,530   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | running | 9/13/2016      |         | 653           | 1,930   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear No odor |
| 1     | xxx               | 118.4          | XXX       | 100     |                |         | 653           | 1,110   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 2/23/2017      | 400     | 463           | 1,470   | < 0.001 | < 0.001 | < 0.001          | < 0.003          |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | running | 5/26/2017      | 400     | 463           | 1,060   | < 0.001 | <0.001  | < 0.001          | < 0.003          |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | running | 9/11/2017      | 490     | 463           | 1,120   | < 0.001 | <0.001  | < 0.001          | <0.003           |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     |                | 560     | 463           | 1,310   | < 0.001 | <0.001  | < 0.001          | <0.003           |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 3/1/2018       | 550     | 427           | 1,260   | < 0.001 | <0.001  | < 0.001          | <0.003           |         | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 6/1/2018       | 470     | 427           | 1,100   | < 0.001 | <0.001  | < 0.001          | <0.003           | 39      | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 9/7/2018       |         | 427           | 840     | < 0.001 | <0.001  | < 0.001          | <0.003           | 66      | Clear No odor |
| 1     | ХХХ               | 118.4          | XXX       | 100     | 11/15/2018     | 288     | 427           | 452     | < 0.001 | <0.001  | < 0.001          | <0.003           | 129     | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 3/7/2019       | 530     | 381           | 1,160   | < 0.001 | < 0.001 | < 0.001          | <0.003           | 74      | Clear No odor |
| 1     | ХХХ               | 118.4          | XXX       | Running | 5/30/2019      | 336     | 381           | 881     | < 0.001 | <0.001  | < 0.001          | <0.003           | 61      | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | Running | 8/30/2019      | 380     | 381           | 932     | < 0.001 | <0.001  | <0.001           | <0.003           | 61      | Clear No odor |
| 1     | XXX               | 118.4          | XXX       | 100     | 11/20/2019     | 276     | 381           | 737     | < 0.001 | <0.001  | <0.001           | <0.003           | 56      | Clear No odor |

## Table 2 - MW-2 (up-gradient) groundwater data (concentrations in mg/l)

| 2         71.1         84.3         2.1         10         3/5/2015         100         71         500         <0.001  |   |      | (    |     |    |            |     |    | 6/ · / |         |         |         |         |       |               |
|--|---|------|------|-----|----|------------|-----|----|--------|---------|---------|---------|---------|-------|---------------|
| MW         Water         Depth         Volume         Purged         Sample Date         CL         avg CL         TDS         Benzene         Toluene         Benzene         Xylenes         Sulfate         Comments           2         70.5         84.2         2.2         10         11/22/2010         68         68         340         <0.001 |   |      |      |     |    |            |     |    |        |         |         |         |         |       |               |
| 2         70.5         84.2         2.2         10         11/22/2010         68         68         340  |   |      |      |     |    |            |     |    |        | _       |         |         |         | - K - |               |
| 2         70.6         84.3         2.2         10         2/18/2011         60         54         403   |   |      |      |     |    |            |     | -  |        |         |         |         |         |       |               |
| 2         70.7         84.3         2.2         10         6/3/2011         56         54         384         <0.001         <0.001         <0.003         57         Clear no od           2         70.7         84.3         2.2         10         9/1/2011         56         54         407         <0.001   |   |      |      |     |    |            |     |    |        |         |         |         |         |       |               |
| 2         70.7         84.3         2.2         10         9/1/2011         56         54         407         <0.001         <0.001         <0.003         59         Clear no od           2         70.8         84.3         2.2         10         12/3/2011         44         54         350         <0.001  |   |      |      |     |    |            |     |    |        |         |         |         |         |       |               |
| 2         70.8         84.3         2.2         10         12/3/2011         44         54         350         <0.001         <0.001         <0.003         54         Clear no od           2         70.9         84.3         2.1         10         2/23/2012         116         67         442         <0.001                                      |   |      |      |     |    |            |     |    |        |         |         |         |         |       |               |
| 2         70.9         84.3         2.1         10         2/23/2012         116         67         448         <0.001         <0.001         <0.003         62         Clear no od           2         70.9         84.3         2.1         10         5/31/2012         40         67         349         <0.001                                      |   |      |      |     |    |            |     |    |        |         |         |         |         |       |               |
| 2         70.9         84.3         2.1         10         \$/31/2012         40         67         422         <0.001         <0.001         <0.003         64         Clear no od           2         71.1         84.3         2.1         10         8/24/2012         60         67         399         <0.001                                      |   |      |      |     |    |            |     |    |        |         |         |         |         | 54    | Clear no odor |
| 2         71.1         84.3         2.1         10         8/24/2012         60         67         399         <0.001         <0.001         <0.003         <51         Clear no od           2         71.2         84.3         2.1         10         11/19/2012         52         67         398         <0.001                                     |   |      |      |     |    |            |     |    |        |         |         |         |         | 62    | Clear no odor |
| 2         71.2         84.3         2.1         10         11/19/2012         52         67         398         <0.001         <0.001         <0.003         <48         Clear no od           2         71.4         84.3         2.1         10         2/13/2013         60         52         380         <0.001                                     |   |      |      |     | 10 |            |     |    |        |         |         |         |         |       |               |
| 2         71.4         84.3         2.1         10         2/13/2013         60         52         380         <0.001  |   | 71.1 | 84.3 |     | 10 |            |     |    |        | < 0.001 | <0.001  |         | <0.003  |       |               |
| 2         71.7         84.3         2.0         10         5/29/2013         32         52         595         <0.001         <0.001         <0.003         43         Clear no od           2         71.9         84.3         2.0         10         9/5/2013         56         52         419         <0.001  |   | 71.2 | 84.3 |     | 10 |            |     |    | 398    |         | <0.001  |         |         | 48    | Clear no odor |
| 2         71.9         84.3         2.0         10         9/5/2013         56         52         419         <0.001         <0.001         <0.003         54         Clear no od           2         71.8         84.3         2.0         10         11/14/2013         60         52         419         <0.001                                       |   | 71.4 | 84.3 |     | 10 |            |     |    |        |         |         | <0.001  |         | 55    | Clear no odor |
| 2         71.8         84.3         2.0         10         11/14/2013         60         52         419         <0.001         <0.001         <0.003         57         Clear no od           2         71.9         84.3         2.0         10         3/6/2014         64         74         292         <0.001                                       |   |      | 84.3 |     | 10 | 5/29/2013  |     |    |        | < 0.001 | <0.001  | < 0.001 | <0.003  | 43    | Clear no odor |
| 2         71.9         84.3         2.0         10         3/6/2014         64         74         292         <0.001         <0.001         <0.003         57         Clear no od           2         71.8         84.3         2.0         10         6/4/2014         68         74         406         <0.001   |   | 71.9 | 84.3 | 2.0 | 10 | 9/5/2013   | 56  |    | 419    | < 0.001 | <0.001  | < 0.001 | <0.003  | 54    | Clear no odor |
| 2         71.8         84.3         2.0         10         6/4/2014         68         74         406         <0.001         <0.001         <0.003         54         Clear no od           2         71.9         84.3         2.0         10         8/23/2014         72         74         414         <0.001  | 2 | 71.8 | 84.3 | 2.0 | 10 | 11/14/2013 | 60  | 52 | 419    | <0.001  | <0.001  | <0.001  | <0.003  | 57    | Clear no odor |
| 2         71.9         84.3         2.0         10         8/23/2014         72         74         414         <0.001         <0.001         <0.003         50         Clear no od           2         71.1         84.3         2.1         10         12/4/2014         92         74         456         <0.001                                       | 2 | 71.9 | 84.3 | 2.0 | 10 | 3/6/2014   | 64  | 74 | 292    | <0.001  | <0.001  | <0.001  | <0.003  | 57    | Clear no odor |
| 2         71.1         84.3         2.1         10         12/4/2014         92         74         456         <0.001         <0.001         <0.003         41         Clear no od           2         71.1         84.3         2.1         10         3/5/2015         100         71         500         <0.001                                       | 2 | 71.8 | 84.3 | 2.0 | 10 | 6/4/2014   | 68  | 74 | 406    | <0.001  | <0.001  | <0.001  | <0.003  | 54    | Clear no odor |
| 2         71.1         84.3         2.1         10         3/5/2015         100         71         500         <0.001         <0.001         <0.003         44         Clear no od           2         71.2         84.3         2.1         10         6/4/2015         64         71         446         <0.001  | 2 | 71.9 | 84.3 | 2.0 | 10 | 8/23/2014  | 72  | 74 | 414    | <0.001  | <0.001  | <0.001  | <0.003  | 50    | Clear no odor |
| 2         71.2         84.3         2.1         10         6/4/2015         64         71         446         <0.001         <0.001         <0.003         48         Clear no od           2         71.7         84.3         2.0         10         8/24/2015         36         71         470         <0.001  | 2 | 71.1 | 84.3 | 2.1 | 10 | 12/4/2014  | 92  | 74 | 456    | <0.001  | <0.001  | <0.001  | <0.003  | 41    | Clear no odor |
| 2       71.7       84.3       2.0       10       8/24/2015       36       71       470       <0.001  | 2 | 71.1 | 84.3 | 2.1 | 10 | 3/5/2015   | 100 | 71 | 500    | < 0.001 | <0.001  | < 0.001 | <0.003  | 44    | Clear no odor |
| 2       71.9       84.3       2.0       10       11/13/2015       84       71       346       <0.001   | 2 | 71.2 | 84.3 | 2.1 | 10 | 6/4/2015   | 64  | 71 | 446    | < 0.001 | <0.001  | < 0.001 | <0.003  | 48    | Clear no odor |
| 2       71.9       84.3       2.0       10       2/29/2016       40       58       436       <0.001  | 2 | 71.7 | 84.3 | 2.0 | 10 | 8/24/2015  | 36  | 71 | 470    | < 0.001 | <0.001  | < 0.001 | <0.003  | 39    | Clear no odor |
| 2       71.8       84.3       2.0       10       5/20/2016       40       58       356       <0.001  | 2 | 71.9 | 84.3 | 2.0 | 10 | 11/13/2015 | 84  | 71 | 346    | < 0.001 | <0.001  | < 0.001 | <0.003  | 62    | Clear no odor |
| 2       71.9       84.3       2.0       10       9/13/2016       56       58       392       <0.001  | 2 | 71.9 | 84.3 | 2.0 | 10 | 2/29/2016  | 40  | 58 | 436    | < 0.001 | <0.001  | < 0.001 | <0.003  | 63    | Clear No odor |
| 2       72.0       84.3       2.0       10       11/16/2016       96       58       466       <0.001   | 2 | 71.8 | 84.3 | 2.0 | 10 | 5/20/2016  | 40  | 58 | 356    | < 0.001 | <0.001  | < 0.001 | <0.003  | 65    | Clear No odor |
| 2       72.0       84.3       2.0       10       2/23/2017       52       58       424       <0.001  | 2 | 71.9 | 84.3 | 2.0 | 10 | 9/13/2016  | 56  | 58 | 392    | < 0.001 | <0.001  | < 0.001 | <0.003  | 79    | Clear No odor |
| 2       71.1       84.3       2.0       10       5/26/2017       92       58       522       <0.001  | 2 | 72.0 | 84.3 | 2.0 | 10 | 11/16/2016 | 96  | 58 | 466    | < 0.001 | <0.001  | <0.001  | <0.003  | 32    | Clear No odor |
| 2       72.2       84.3       1.9       10       9/11/2017       40       58       278       <0.001  | 2 | 72.0 | 84.3 | 2.0 | 10 | 2/23/2017  | 52  | 58 | 424    | < 0.001 | < 0.001 | < 0.001 | <0.003  | 60    | Clear No odor |
| 2       72.2       84.3       1.9       10       11/30/2017       48       58       444       <0.001   | 2 | 71.1 | 84.3 | 2.0 | 10 | 5/26/2017  | 92  | 58 | 522    | < 0.001 | <0.001  | < 0.001 | <0.003  | 52    | Clear No odor |
| 2       72.2       84.3       1.9       10       3/1/2018       40       47       230       <0.001   | 2 | 72.2 | 84.3 | 1.9 | 10 | 9/11/2017  | 40  | 58 | 278    | < 0.001 | <0.001  | <0.001  | <0.003  | 64    | Clear No odor |
| 2       72.3       84.3       1.9       10       6/1/2018       68       47       402       <0.001   |   | 72.2 |      |     | 10 |            | 48  |    | 444    |         |         | <0.001  |         |       |               |
| 2       72.3       84.3       1.9       10       6/1/2018       68       47       402       <0.001   | 2 | 72.2 | 84.3 | 1.9 | 10 | 3/1/2018   | 40  | 47 | 230    | < 0.001 | <0.001  | <0.001  | <0.003  | 64    | Clear No odor |
| 2       72.4       84.3       1.9       8       9/7/2018       40       47       482       <0.001  |   | 72.3 | 84.3 | 1.9 | 10 |            | 68  | 47 | 402    | < 0.001 | <0.001  | <0.001  | <0.003  | 79    | Clear No odor |
| 2         72.5         84.3         1.9         8         11/15/2018         40         47         196         <0.001         <0.001         <0.003         64         Clear No oc           2         72.6         84.3         1.9         10         3/7/2019         96         64         546         <0.001  |   |      | 84.3 |     |    |            |     | 47 |        | < 0.001 | <0.001  | <0.001  | <0.003  | 59    | Clear No odor |
| 2         72.6         84.3         1.9         10         3/7/2019         96         64         546         <0.001         <0.001         <0.003         61         Clear No or           2         72.7         84.3         1.9         10         5/30/2019         36         64         445         <0.001  | 2 | 72.5 | 84.3 | 1.9 | 8  |            | 40  | 47 | 196    |         |         | <0.001  |         | 64    | Clear No odor |
| 2         72.7         84.3         1.9         10         5/30/2019         36         64         445         <0.001         <0.001         <0.003         62         Clear No oc           2         72.8         84.3         1.8         10         8/30/2019         60         64         456         <0.001                                       |   |      |      |     | 10 |            |     |    |        |         |         | <0.001  |         |       |               |
| 2 72.8 84.3 1.8 10 8/30/2019 60 64 456 <0.001 <0.001 <0.001 <0.003 57 Clear No oc  |   |      |      |     |    |            |     |    |        |         |         |         |         |       |               |
|  |   | 72.8 |      | 1.8 | 10 |            |     |    | 456    |         |         |         |         |       |               |
| 2 73.1 84.3 1.8 8 11/20/2019 64 64 407 <0.001 <0.001 <0.001 <0.003 55 Clear No oc  | 2 | 73.1 |      | 1.8 | 8  | 11/20/2019 | 64  |    | 407    | < 0.001 |         |         | < 0.003 |       | Clear No odor |



March 19, 2019

KATIE JONES Rice Operating Company 112 W. Taylor Hobbs, NM 88240

RE: VACUUM F-34 VENT

Enclosed are the results of analyses for samples received by the laboratory on 03/11/19 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 03/11/2019                      | Sampling Date:      | 03/07/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 03/19/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

## Sample ID: MONITOR WELL #1 (H900963-01)

| ь<br>ВТЕХ 8021В                      | `mg/   | L               | Analyze    | d By: MS     |       |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|-------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.001 | 0.001           | 03/15/2019 | ND           | 0.020 | 100        | 0.0200        | 2.37  |           |
| Toluene*                             | <0.001 | 0.001           | 03/15/2019 | ND           | 0.019 | 97.1       | 0.0200        | 0.723 |           |
| Ethylbenzene*                        | <0.001 | 0.001           | 03/15/2019 | ND           | 0.019 | 93.8       | 0.0200        | 2.54  |           |
| Total Xylenes*                       | <0.003 | 0.003           | 03/15/2019 | ND           | 0.062 | 103        | 0.0600        | 0.149 |           |
| Total BTEX                           | <0.006 | 0.006           | 03/15/2019 | ND           |       |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PID | 107 %  | 81.3-12         | 8          |              |       |            |               |       |           |
| Chloride, SM4500Cl-B                 | mg/    | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Chloride*                            | 530    | 4.00            | 03/13/2019 | ND           | 108   | 108        | 100           | 3.77  |           |
| Sulfate 375.4                        | mg/    | L               | Analyze    | d By: JH     |       |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Sulfate*                             | 74.5   | 10.0            | 03/14/2019 | ND           | 21.3  | 106        | 20.0          | 6.80  |           |
| TDS 160.1                            | mg/    | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| TDS*                                 | 1160   | 5.00            | 03/14/2019 | 5.00         | 514   | 97.5       | 527           | 2.27  |           |
|                                      |        |                 |            |              |       |            |               |       |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 03/11/2019                      | Sampling Date:      | 03/07/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 03/19/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

#### Sample ID: MONITOR WELL #2 (H900963-02)

| BTEX 8021B                           | mg/     | L               | Analyze    | d By: MS     |       |            |               |       |           |
|--------------------------------------|---------|-----------------|------------|--------------|-------|------------|---------------|-------|-----------|
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | < 0.001 | 0.001           | 03/15/2019 | ND           | 0.020 | 100        | 0.0200        | 2.37  |           |
| Toluene*                             | < 0.001 | 0.001           | 03/15/2019 | ND           | 0.019 | 97.1       | 0.0200        | 0.723 |           |
| Ethylbenzene*                        | < 0.001 | 0.001           | 03/15/2019 | ND           | 0.019 | 93.8       | 0.0200        | 2.54  |           |
| Total Xylenes*                       | <0.003  | 0.003           | 03/15/2019 | ND           | 0.062 | 103        | 0.0600        | 0.149 |           |
| Total BTEX                           | <0.006  | 0.006           | 03/15/2019 | ND           |       |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PID | 104 %   | % 81.3-12       | 8          |              |       |            |               |       |           |
| Chloride, SM4500Cl-B                 | mg/     | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Chloride*                            | 96.0    | 4.00            | 03/13/2019 | ND           | 108   | 108        | 100           | 3.77  |           |
| Sulfate 375.4                        | mg/     | L               | Analyze    | d By: JH     |       |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Sulfate*                             | 61.0    | 10.0            | 03/14/2019 | ND           | 21.3  | 106        | 20.0          | 6.80  |           |
| TDS 160.1                            | mg/     | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| TDS*                                 | 546     | 5.00            | 03/14/2019 | 5.00         | 514   | 97.5       | 527           | 2.27  |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



## **Notes and Definitions**

- ND
   Analyte NOT DETECTED at or above the reporting limit

   RPD
   Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

#### Cardinal Laboratories

#### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

| 01 East Marland - Hobbs, NN              | 188240 Condi             | no               | 1 T   | 0            | h      | <b>n P</b>       | •••       | 10     |        | <b>i</b> ~ | R                              | T                           | 0           |          |                |                | CH/  | AIN-  | OF                                  | -CU                 | IST             | OD   | YA                   | ND                         | AN             | AL'                  | YSI                              | S RI                    | EQU                         | ES                     | Г         |   |
|--|--------------------------|------------------|---|--------------|--------|------------------|-----------|--------|--------|------------|--------------------------------|-----------------------------|-------------|----------|----------------|----------------|--|---|-------------------------------------|---------------------|-----------------|------|----------------------|----------------------------|----------------|----------------------|----------------------------------|-------------------------|-----------------------------|------------------------|-----------|---|
| Tel (575) 393-2326<br>Fax (575) 393-2476 | Cardi                    | lla              |   | a            |        | UI               | a         | ιυ     |        | Ie         | 5,                             | 111                         | C.          |          |                |                |  | L   | AB (                                | Orde                | r ID a          | #    |                      | x                          |                |                      |                                  |                         |                             |                        |           |   |
| ompany Name:<br>RICE Operating (         | Company                  |                  | BILL T  |              |        | npany<br>ating   |           |        | 201    |            |                                | PO#                         |             |          |                |                |  |   | 2                                   | AN/                 | ALY             | SIS  | S RI                 | EQL                        | JES            | Т                    |                                  |                         |                             |                        |           |   |
| roject Manager:                          | Sompany                  |                  | RICE Operating Company         ANALTSIS REQUEST           Address:         (Street, City, Zip)           (Circle or Specify Method No.) |              |        |                  |           |        |        |            |                                |                             |             |          |                |                |  |   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| Katie Jones                              |                          |                  | 122 W   | Taylo        | or Str | eet ~            | Hobi      | bs, Ne | ew M   | exico      | 8824                           | 0                           |             |          |                |                |  |   |                                     |                     |                 |      |                      | - 1                        |                | 1                    |                                  | []                      |                             |                        |           | 1 |
| Address: (Street, City, Zip)             |                          |                  |   |              | Phor   |                  |           |        |        |            |                                | Fax#:                       |             |          | 1              |                |  | 2   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| 122 W Taylor Street ~ He<br>hone #:      | obbs, New Mexico 88240   | Fax #:           | (575  | ) 39         | 3-9    | 1/4              | }         |        |        |            |                                | (575)                       | 397-        | 1471     |                |                |  | 3/20(   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| (575) 393-9174                           |                          |                  | ) 397-  | -147         | 1      |                  |           |        | _      |            |                                |                             |             |          |                | 100            | 1000   | 010   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| roject #:                                | Project Name:            |                  |   |              |        |                  | /         |        | 1      | 1          | -                              | )                           |             |          | 1              |                | nar  | Pg 0  | Рg                                  |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| roject Location:                         | Vacuum F-34 Vent         |                  |   | _            | Sam    | pler S           | Signa     | itere: | R      | zanne      | e Joh                          | inson (5                    | 75)631      | -9310    |                |                | XIEII  | Se  | b Se                                |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| 5  | 34 F ~ Lea County New Me | exico            |   | /            | 1      | 1                | 7         | K      | L      | $\sim$     | _                              |                             | , 0,001     |          |                |                | ß  | 12  | C P                                 |                     |                 |      |                      | 325                        |                |                      |                                  |                         | 03                          |                        |           |   |
|  |                          |                  |   | A            | M      | ATRI             | x         | 1      | PR     | ESEF       |                                |                             | SAM         | PLING    | 1              |                |  | B   | Cd                                  |                     |                 |      | 4                    | 70C/                       |                |                      |                                  | Ŷ                       | 3, 1                        | s                      |           |   |
|  |                          | ٩                | SS  | F            |        |                  |           | -      | T      | MET        | 1                              | 1                           |             | T        |                |                | 100  | s Ba  | As Ba                               | les                 |                 |      | B/62                 | . 82                       |                | /608                 |                                  | , Na,                   | 8                           | Solid                  |           |   |
| LAB #                                    | FIELD CODE               | (G)rab or (C)omp | CONTAINERS  |              |        |                  |           | NON    | NOA I  |            |                                | ICE (1-1Liter HDPE)<br>NONE | 6           |          | MTBE 8021B/602 | BTEX 8021B/602 | 410.1/1.41009 / 1.41009 Exterided (039)<br>8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200. | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Semi Volatiles | des             |      | GC/MS Vol. 8260B/624 | GC/MS Semi. Vol. 8270C/625 | 608            | Pesticides 8081A/608 | BOD, TSS, pH<br>Moisture Content | Cations (Ca, Mg, Na, K) | Anions (CI, SO4, CO3, HCO3) | Total Dissolved Solids |           |   |
| LAB USE                                  | TILLD CODL               | 0) IO            | TAI   | ~            |        |                  | Щ         |        | 1011   | 04         |                                | Liter                       | DATE (2019) |          | 30211          | 021E           | 70C  | etals   | etals                               | TCLP Semi Vol       | TCLP Pesticides |      | Vol.                 | Semi                       | PCB's 8082/608 | es 8                 | BOD, TSS, pH<br>Moisture Cont    | (Ca                     | Ú.                          | ssolv                  | s         | 2 |
| ONLY                                     |                          | rab o            | NO  | WATER        | ≓      | ~                | SLUDGE    | 2      | HND    | NaHSO4     | H <sub>2</sub> SO <sub>4</sub> | ICE (1-1<br>NONE            | ШЩ          | ш        | BE 8           | 8 X            | PAH 8270C  | Me  | P N                                 | N N                 | P P             |      | WS                   | WS                         | 3's 8          | ticide               | Sture                            | ions                    | suo                         | Total Dis              | Chlorides | 5 |
| 4900963                                  |                          | 9                | #   | Ň            | SOIL   | AIR              | SL        | Ē      | 길로     | Na         | H <sub>2</sub>                 | <u>S</u> S                  | DA          | TIME     | MT             | BTE            | PAH  | Tot   | TCL                                 | 12                  | TCL             | RCI  | 00<br>CO             | 00                         | DG             | Pes                  | Noi<br>Noi                       | Cat                     | Anie                        | Tot                    | CPI       | 5 |
| / Moni                                   | tor Well #1              | G                | 3   | X            |        |                  |           | 2      | 2      |            |                                | 1                           | 3/7         | 11:50    |                | X              |  |   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             | x x                    | _         | K |
| 2 Moni                                   | tor Well #2              | G                | 3   | X            |        |                  | $\square$ | 2      | 2      | $\square$  |                                | 1                           | 3/7         | 8:45     |                | X              |  |   |                                     |                     |                 |      |                      |                            |                | _                    |                                  |                         |                             | x x                    | ( X       | ٢ |
|  |                          |                  |   | $\vdash$     |        | $\left  \right $ | +         |        | +      | +          |                                |                             |             | <u> </u> |                |                | +  | +   |                                     | _                   | ┢               |      |                      | -                          | +              | $\rightarrow$        | +                                | $\square$               | $\vdash$                    |                        | +         | _ |
|  |                          |                  |   | +            |        | +                | -         | -      | +      | +-         |                                | _                           |             | <u> </u> | -              | $\rightarrow$  |  | +   | _                                   |                     |                 |      |                      | $\rightarrow$              | +              | +                    | ┾                                | +                       | $\vdash$                    | +                      | ┿         | _ |
|  |                          | -                |   | +            |        | +                | +         |        | +      | +          |                                |                             |             | -        |                | _              |  | +   | -                                   | +                   | ┝               | -    |                      | -                          | +              | +                    | +                                | +                       | $\vdash$                    | _                      | ┿         | _ |
|  |                          |                  |   | +            |        | $\square$        | +         | -      | +      | +          |                                |                             |             |          |                | -              | +  | +   | -                                   | +                   | +               | -    |                      | -                          | +              | +                    | +                                | +                       | $\vdash$                    | +                      | +         | - |
|  |                          |                  | 1   | $\square$    |        |                  |           |        | +      |            |                                |                             |             |          |                |                | +  | ++  |                                     | +                   | ┢               |      |                      | +                          | +              | +                    | +                                | +                       | $\vdash$                    | +                      | +         | - |
| 1  | 4                        |                  |   | $\square$    |        |                  |           |        | $^{+}$ |            |                                |                             |             |          |                |                |  | +   |                                     | +                   | $\vdash$        |      |                      |                            | +              |                      | +                                | $\square$               | Ηt                          | 1                      | +         |   |
|  |                          |                  |   |              |        |                  |           |        |        |            |                                |                             |             |          |                |                |  | $\square$                                       |                                     |                     |                 |      |                      |                            |                |                      |                                  | $\square$               | Π                           |                        | 1         |   |
| elinquished by:                          | Date: Time:              | Recei            | ved by  | :            |        | /                | 20        | 1      | 1      | Date:      |                                | Time:                       |             |          | Pho            | ne R           | esults   | 5   | )                                   | /es                 |                 | No   |                      |                            |                |                      |                                  |                         |                             |                        |           | _ |
| ozanne Johnson                           | -3/11/2019 13:25         |                  | au  | Ian          | B      | K.               | la        | al     | 5      | 1:         | 3-1                            | 1-19                        | 13          | :ZS      | Fax            | Resu           | lts  |   | N                                   | /es                 |                 | No   |                      | Addi                       | tiona          | al Fa                | ax Nu                            | mbe                     | :r:                         |                        |           |   |
| elinquished by:                          | Date: Time:              | Recei            | ved By  | : (La        | abor   | atory            | Sta       | ff) 🗸  |        | Date:      |                                | Time:                       |             |          | REI            | MAR            | (S:  |   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| V  |                          |                  |   |              |        |                  |           |        |        |            |                                |                             |             |          |                | Ema            | Res  | sults   |                                     | kjon                |                 |      |                      |                            | _              |                      |                                  |                         |                             |                        |           |   |
| elivered By: (Circle                     | One)                     | Sample           | e Condi   | tion<br>Cool |        | Intact           |           | С      | HEC    | KED I      | BY:                            |                             |             |          |                |                |  |   | I                                   | oza                 | nne             | e11( | @w                   | inds                       | strea          | am.                  | net                              |                         |                             |                        |           |   |
|  |                          |                  | Yes   | -            | Yes    | -                | -         | ( r    | nitial | S)         |                                |                             |             |          |                |                |  |   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |
| Sampler / UPS                            | - Bus - Other:           |                  | No  |              | No     |                  |           |        | 0      |            |                                |                             |             |          |                |                |  |   |                                     |                     |                 |      |                      |                            |                |                      |                                  |                         |                             |                        |           |   |



June 06, 2019

KATIE JONES Rice Operating Company 112 W. Taylor Hobbs, NM 88240

RE: VACUUM F-34 VENT

Enclosed are the results of analyses for samples received by the laboratory on 06/03/19 10:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 06/03/2019                      | Sampling Date:      | 05/30/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 06/06/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

## Sample ID: MONITOR WELL #1 (H901929-01)

| BTEX 8021B                           | mg/    | L               | Analyze    | d By: ms     |       |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|-------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.001 | 0.001           | 06/04/2019 | ND           | 0.021 | 106        | 0.0200        | 2.52 |           |
| Toluene*                             | <0.001 | 0.001           | 06/04/2019 | ND           | 0.022 | 110        | 0.0200        | 1.67 |           |
| Ethylbenzene*                        | <0.001 | 0.001           | 06/04/2019 | ND           | 0.020 | 101        | 0.0200        | 2.26 |           |
| Total Xylenes*                       | <0.003 | 0.003           | 06/04/2019 | ND           | 0.063 | 105        | 0.0600        | 2.19 |           |
| Total BTEX                           | <0.006 | 0.006           | 06/04/2019 | ND           |       |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 101 %  | 81.3-12         | 8          |              |       |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | L               | Analyze    | d By: AC     |       |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride*                            | 336    | 4.00            | 06/04/2019 | ND           | 100   | 100        | 100           | 0.00 |           |
| Sulfate 375.4                        | mg/    | L               | Analyze    | d By: AC     |       |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| Sulfate*                             | 61.3   | 10.0            | 06/04/2019 | ND           | 21.1  | 105        | 20.0          | 4.96 |           |
| TDS 160.1                            | mg/    | L               | Analyze    | d By: AC     |       |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| TDS*                                 | 881    | 5.00            | 06/06/2019 | ND           | 520   | 98.7       | 527           | 2.05 |           |

#### Cardinal Laboratories

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 06/03/2019                      | Sampling Date:      | 05/30/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 06/06/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

#### Sample ID: MONITOR WELL #2 (H901929-02)

| BTEX 8021B                           | mg/    | L               | Analyze    | d By: ms     |       |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|-------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.001 | 0.001           | 06/04/2019 | ND           | 0.021 | 106        | 0.0200        | 2.52 |           |
| Toluene*                             | <0.001 | 0.001           | 06/04/2019 | ND           | 0.022 | 110        | 0.0200        | 1.67 |           |
| Ethylbenzene*                        | <0.001 | 0.001           | 06/04/2019 | ND           | 0.020 | 101        | 0.0200        | 2.26 |           |
| Total Xylenes*                       | <0.003 | 0.003           | 06/04/2019 | ND           | 0.063 | 105        | 0.0600        | 2.19 |           |
| Total BTEX                           | <0.006 | 0.006           | 06/04/2019 | ND           |       |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 102 %  | 6 81.3-12       | 8          |              |       |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | L               | Analyze    | d By: AC     |       |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride*                            | 36.0   | 4.00            | 06/04/2019 | ND           | 100   | 100        | 100           | 0.00 |           |
| Sulfate 375.4                        | mg/    | L               | Analyze    | d By: AC     |       |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| Sulfate*                             | 62.2   | 10.0            | 06/04/2019 | ND           | 21.1  | 105        | 20.0          | 4.96 |           |
| TDS 160.1                            | mg/    | L               | Analyze    | d By: AC     |       |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD  | Qualifier |
| TDS*                                 | 445    | 5.00            | 06/06/2019 | ND           | 520   | 98.7       | 527           | 2.05 |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



## **Notes and Definitions**

- ND
   Analyte NOT DETECTED at or above the reporting limit

   RPD
   Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

#### Cardinal Laboratories

#### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

| 3396 5 of 5  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             |         |                |                |                                      |   |                                     |                | - A Sugar           |                 |      |                       |                |                      | P            | age              | ∍ <u>_1</u>             | 1         | of                     | 1         | -                           |
|--|---------------------------------|------------------|------------------------------|--------------|-----------|---------------|------------------|------------------|--------|-------|-----------------------------|-------------|---------|----------------|----------------|--------------------------------------|---|-------------------------------------|----------------|---------------------|-----------------|------|-----------------------|----------------|----------------------|--------------|------------------|-------------------------|-----------|------------------------|-----------|-----------------------------|
| 101 East Marland - Ho<br>Tel (575) 39                        | 3-2326                          | na               | IL                           | al           | bo        | ora           | to               | ri               | es     | 5.    | In                          | c.          |         |                |                | CH                                   |   |                                     | -              | _                   |                 | -    | AN                    | DA             | NA                   | LY           | SIS              | RE                      | QUI       | ST                     |           |                             |
| Fax (575) 39<br>Company Name:                                | 3-2476                          |                  | BILL T                       |              | Comp      |               | _                |                  |        | -     | PO#                         |             |         | -              |                | _                                    |   | LAE                                 |                | Jer I               | U#.             | -    |                       |                |                      |              |                  |                         | -2        |                        |           |                             |
| 5 S  | ting Company                    |                  | 19494-000000000000           |              |           | ting Co       | mpa              | any              |        |       | 0#                          |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       | QUE            | THORSE LEAD          |              |                  |                         |           |                        |           |                             |
| Project Manager:   |                                 |                  | Address: (Street, City, Zip) |              |           |               |                  |                  |        | 1     |                             |             |         |                | (Cir           | cle d                                | or Sp   | becif                               | y Me           | thod                | No.)            | )    |                       |                | 76                   | ar a         |                  |                         |           |                        |           |                             |
| Katie Jones  |                                 | _                | 122 W                        |              | -         | et ~ Hobb     | s, Ne            | w Me             | xico 8 | _     |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
|  | Street, City, Zip)              |                  | (575                         |              |           |               |                  |                  |        |       | Fax#:                       |             | 1 4 7 4 |                |                |                                      | 10  | 3                                   |                |                     |                 |      |                       |                |                      |              | 11               |                         |           |                        |           |                             |
| Phone #:   | eet ~ Hobbs, New Mexico 88240   | Fax #:           | (575                         | 393          | 5-91      | 74            | _                |                  | 6      |       | (575)                       | 397-        | 1471    |                |                |                                      | 00/8  |                                     |                |                     |                 |      |                       |                |                      |              | 11               |                         |           |                        |           |                             |
| (575) 393-9 <sup>-</sup>                                     | 174                             | (575)            | 397-                         | 147 <i>°</i> | 1         |               | -                | 10               |        |       |                             |             |         |                |                | C35                                  | 010   |                                     |                | -                   |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
| Project #:   | Project Name:                   |                  |                              |              | /         |               | 1                | 17               | )      |       |                             |             |         |                |                | ) pa                                 | 2   | ·<br>말<br>문                         |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
| Project Location:  | Vacuum F-34 Vent                |                  |                              |              | -         |               | -                | Der              | /      | labe  | //-*                        |             | 0010    |                |                | tend                                 | Set   | Se                                  |                |                     |                 |      |                       |                |                      |              | 11               |                         |           |                        |           |                             |
| Second and the second structure and the second structure and | -Sec34 F ~ Lea County New Me    | vico             | /                            | -            | Samp      | ler Signat    | ure.             | ROZ              | anne   | John  | nson (5)                    | (0)031      | -9310   |                |                | 2 EX                                 | đ   | L P                                 |                |                     |                 |      | 5                     |                |                      |              | 11               | EC                      | 3         |                        |           | urs                         |
| H901929  |                                 |                  | K                            |              | MA        | TRIX          | T                |                  | SER    |       | 2010000                     | SAM         | PLING   |                |                | / TX100                              | C P J C   | Ba Cd C                             |                |                     |                 | 3    | 270CIR'               |                | 8                    |              |                  | a, K)                   | 211,00    | spi                    |           | - 24 Ho                     |
| LAB #  | FIELD CODE                      | (C)omp           | # CONTAINERS                 | $\prod$      |           |               | Oml VOA)         |                  |        |       | ter HDPE)                   | 019)        |         | 21B/602        | 21B/602        | 418.1/TX1005 / TX1005 Extended (C35) | PAH_82/UC<br>Total Metals An As Ba Cri Cr Ph Sa Hri 60108/200 7 | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | atiles         | TCLP Semi Volatiles | ticides         | RCI  | GUINIS VOI. 02000/024 | 82/608         | Pesticides 8081A/608 | , pH         | Content          | Cations (Ca, Mg, Na, K) | 1, 004, 0 | Total Dissolved Solids |           | Turn Around Time ~ 24 Hours |
|  |                                 | (G)rab or (C)omp | # CONT                       | WATER        | SOIL      | AIR<br>SLUDGE | HCL (2 40ml VOA) | HNO <sub>3</sub> | NaHSO4 | H2SO4 | ICE (1-1Liter HDPE)<br>NONE | DATE (2019) | TIME    | MTBE 8021B/602 | BTEX 8021B/602 | TPH 418.                             | Total Matals  | TCLP Met                            | TCLP Volatiles | TCLP Sen            | TCLP Pesticides | RCI  | S SMAD                | PCB's 8082/608 | Pesticides           | BOD, TSS, pH | Moisture Content | Cations (               | Sulfates  | Total Diss             | Chlorides | Turn Arou                   |
| 6  | Monitor Well #1                 | G                | 3                            | X            |           |               | 2                |                  |        |       | 1                           | 5/30        | 11:00   |                | x              |                                      |   |                                     |                |                     |                 |      |                       |                |                      | Π            | П                |                         |           | X                      | X         |                             |
| d  | Monitor Well #2                 | G                | 3                            | X            |           |               | 2                |                  |        |       | 1                           | 5/30        | 9:15    |                | X              |                                      |   |                                     |                |                     |                 |      |                       |                |                      | Π            |                  |                         | X         | X                      | X         |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             | 2       |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      | $\square$    | $\square$        |                         |           |                        |           |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             | 1       |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              | $\Box$           |                         |           |                        |           |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
|  |                                 |                  |                              | Ц            |           |               |                  |                  |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
|  |                                 |                  |                              |              |           |               |                  |                  |        |       |                             |             |         |                | -              | 2                                    |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
| Relinquished by:   | Pate: Time:                     | Receiv           |                              |              | 11        | 1             |                  |                  | ate    |       | Time:                       | -           |         | -              | ne F           |                                      | ts  |                                     | Yes            | 5                   | Ν               | 10   |                       |                |                      |              |                  |                         |           |                        |           |                             |
| Rozanne Johnson  |                                 | Ho               | ime                          | 4            | 4         | ma            | en               | 6                | 13     | d     | 19                          | 8:1         | 5/      |                | Res            | -                                    |   |                                     | Yes            | ;                   | N               | 10   | A                     | ditio          | nal                  | Fax          | Num              | ber:                    |           |                        |           |                             |
| Relinquished   | Date: Time:<br>Mm 6/3/2017/0.12 | Receiv           | red By:                      | (Lal         | borat     | tory Staff    | 1                |                  | ate!   |       | Time:<br>-19 -              |             |         |                | MAR<br>Ema     | 8                                    | esuli   | s:                                  | kic            | nes                 | s@1             | rice | swa                   | .cor           | n                    |              |                  |                         |           |                        |           |                             |
| Delivered By: (  | Circle One)                     | Sample           | Conditi                      | on           | -         | P             | CF               | ECK              | ED BY  |       |                             |             |         |                |                |                                      | 3   |                                     |                |                     |                 |      |                       |                | -                    | n.ne         | et               |                         |           |                        |           |                             |
|  | $\bigcirc$                      | 1                | Yes                          |              | Ir<br>Yes |               |                  | itials)          |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      |              |                  |                         |           |                        |           |                             |
| Sampler - L  | JPS - Bus Other:                |                  | No                           | Ν            | NO        |               | Y                | 0                |        |       |                             |             |         |                |                |                                      |   |                                     |                |                     |                 |      |                       |                |                      | A-9-011-001  |                  |                         |           |                        |           |                             |

C



September 12, 2019

KATIE JONES Rice Operating Company 112 W. Taylor Hobbs, NM 88240

RE: VACUUM F-34 VENT

Enclosed are the results of analyses for samples received by the laboratory on 09/04/19 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 09/04/2019                      | Sampling Date:      | 08/30/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 09/12/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

## Sample ID: MONITOR WELL #1 (H903057-01)

| BTEX 8021B                           | mg/     | L               | Analyze    | d By: BF     |       |            |               |       |           |
|--------------------------------------|---------|-----------------|------------|--------------|-------|------------|---------------|-------|-----------|
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | < 0.001 | 0.001           | 09/12/2019 | ND           | 0.021 | 104        | 0.0200        | 1.81  |           |
| Toluene*                             | < 0.001 | 0.001           | 09/12/2019 | ND           | 0.021 | 104        | 0.0200        | 0.145 |           |
| Ethylbenzene*                        | <0.001  | 0.001           | 09/12/2019 | ND           | 0.021 | 107        | 0.0200        | 0.975 |           |
| Total Xylenes*                       | <0.003  | 0.003           | 09/12/2019 | ND           | 0.065 | 108        | 0.0600        | 1.24  |           |
| Total BTEX                           | <0.006  | 0.006           | 09/12/2019 | ND           |       |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PID | 81.8    | % 81.3-12       | 8          |              |       |            |               |       |           |
| Chloride, SM4500Cl-B                 | mg/     | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Chloride*                            | 380     | 4.00            | 09/06/2019 | ND           | 100   | 100        | 100           | 0.00  |           |
| Sulfate 375.4                        | mg/     | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Sulfate*                             | 61.4    | 10.0            | 09/06/2019 | ND           | 18.3  | 91.6       | 20.0          | 9.85  |           |
| TDS 160.1                            | mg/     | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result  | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| TDS*                                 | 932     | 5.00            | 09/06/2019 | ND           | 544   | 103        | 527           | 2.98  |           |
|                                      |         |                 |            |              |       |            |               |       |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 09/04/2019                      | Sampling Date:      | 08/30/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 09/12/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

#### Sample ID: MONITOR WELL #2 (H903057-02)

| BTEX 8021B                           | mg/    | L               | Analyze    | d By: BF     |       |            |               |       |           |
|--------------------------------------|--------|-----------------|------------|--------------|-------|------------|---------------|-------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.001 | 0.001           | 09/12/2019 | ND           | 0.021 | 104        | 0.0200        | 1.81  |           |
| Toluene*                             | <0.001 | 0.001           | 09/12/2019 | ND           | 0.021 | 104        | 0.0200        | 0.145 |           |
| Ethylbenzene*                        | <0.001 | 0.001           | 09/12/2019 | ND           | 0.021 | 107        | 0.0200        | 0.975 |           |
| Total Xylenes*                       | <0.003 | 0.003           | 09/12/2019 | ND           | 0.065 | 108        | 0.0600        | 1.24  |           |
| Total BTEX                           | <0.006 | 0.006           | 09/12/2019 | ND           |       |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PID | 90.7 9 | 81.3-12         | 8          |              |       |            |               |       |           |
| Chloride, SM4500Cl-B                 | mg/    | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Chloride*                            | 60.0   | 4.00            | 09/06/2019 | ND           | 100   | 100        | 100           | 0.00  |           |
| Sulfate 375.4                        | mg/    | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Sulfate*                             | 57.4   | 10.0            | 09/06/2019 | ND           | 18.3  | 91.6       | 20.0          | 9.85  |           |
| TDS 160.1                            | mg/    | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| TDS*                                 | 456    | 5.00            | 09/09/2019 | ND           | 539   | 102        | 527           | 9.17  |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



## **Notes and Definitions**

- ND
   Analyte NOT DETECTED at or above the reporting limit

   RPD
   Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

#### Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

| 3age 5 of 5   | <u>1</u>                          |                  |  |           |                           |            |        |                                      |         |      |      |                |      |       |                |                |  |           |   |                |                     |                 |          |                      |                            |                |                      | Pa           | age              |  |          | of                     | 1         | _                                |
|---|-----------------------------------|------------------|--|-----------|---------------------------|------------|--------|--------------------------------------|---------|------|------|----------------|------|-------|----------------|----------------|--|-----------|---|----------------|---------------------|-----------------|----------|----------------------|----------------------------|----------------|----------------------|--------------|------------------|--|----------|------------------------|-----------|----------------------------------|
| 101 East Marland - Ho<br>Tel (575) 393<br>Fax (575) 393 |                                   | na               | L  | a         | bo                        | ora        | to     | or                                   | ie      | s,   | I    | 10             |      |       |                |                | CH                                       | IAI       |   | -              | -                   | STO             | -        | YA                   | ND                         | AN             | IAL                  | YS           | IS               | REC  | QUE      | ST                     |           | $\neg$                           |
| Company Name:<br>RICE Opera                             | ting Company                      |                  | BILL TO Company: PO#<br>RICE Operating Company<br>Address: (Street, City, Zip) |           |                           |            |        |                                      |         |      |      |                |      |       |                | A              | NA                                       | LY        | SIS   |                | EQU                 |                 |          |                      |                            | 2              | -                    |              |                  | -  |          |                        |           |                                  |
| Project Manager:<br>Katie Jones<br>Address: (S          | treet, City, Zip)                 |                  | 122 W  | Taylo     | Addre<br>or Stre<br>Phone | et ~ Hobl  | bs, N  | ew M                                 |         | 8824 |      | p)             |      |       |                |                |  |           |   |                |                     |                 |          |                      |                            |                |                      |              |                  |  | Ĩ        |                        |           | 1                                |
| 122 W Taylor Stre<br>Phone #:                           | et ~ Hobbs, New Mexico 88240      | Fax #:           | (575)  | 39        | 3-91                      |            |        |                                      |         |      | (575 | 5)39           | 7-14 | ¥71   |                |                | 5)                                       | 2 000100  | 1.002/d0  |                |                     |                 |          |                      |                            |                |                      |              |                  |  |          |                        |           |                                  |
| (575) 393-91<br>Project #:                              | Project Name:<br>Vacuum F-34 Vent | (575)            | 397-   | 147       | 1                         |            | 2      | f                                    |         | )    |      |                |      | _     |                |                | ended (C3                                | 11- 004   | Se Ha   |                |                     |                 |          |                      |                            |                |                      |              |                  |  |          |                        |           |                                  |
| Project Location:<br>T17S-R35E-                         | Sec34 F ~ Lea County New Me       | exico            |  | 1         | 1                         | oler Signa | iture: | <                                    | /       | RVA  | TIVE | -              |      |       |                |                | (1005 Ext                                |           | Cd Cr Pb  |                |                     |                 |          |                      | )C/625                     |                |                      |              |                  |  | Innel    |                        |           | 4 Hours                          |
| LAB #   | FIELD CODE                        | (G)rab or (C)omp | # CONTAINERS   | WATER     |                           | AIR        | Ģ      | HCL (2 40ml VOA)<br>HNO <sub>3</sub> | ME<br>0 |      |      |                |      | LING  | MTBE 8021B/602 | BTEX 8021B/602 | TPH 418.1/TX1005 / TX1005 Extended (C35) | PAH 82/0C | TCLP Metals Ag As Ba Cd Cr Pb Se Hg 00100/200.<br>TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | TCLP Pesticides | RCI      | GC/MS Vol. 8260B/624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082/608 | Pesticides 8081A/608 | BOD, TSS, pH | Moisture Content | Cations (Ca, Mg, Na, K)<br>Anions (CI, SO4, CO3, HCO3) | Sulfates | Total Dissolved Solids | Chlorides | Turn Around Time $\sim 24$ Hours |
|   | Monitor Well #1                   | G                | 3  | X         |                           |            |        | 2                                    |         |      | 1    | _              | -    | 8:55  |                | x              | -  | 1         | Ť   | İ              | Ė                   | 1               |          |                      | Ť                          |                |                      |              | 1                | 1  | -        | X                      | X         |                                  |
|   | Monitor Well #2                   | G                | 3  | x         |                           |            |        | 2                                    |         | П    | 1    | 8              | /30  | 10:10 |                | x              |  | 1         | 1   | F              |                     |                 |          |                      |                            |                |                      | $\square$    | $\downarrow$     | 1  |          | x                      | x         |                                  |
|   |                                   |                  |  |           |                           |            |        |                                      |         |      |      |                |      |       |                |                |  |           |   |                |                     |                 |          |                      |                            |                |                      |              |                  |  | +        |                        |           |                                  |
|   | 2.0                               |                  |  |           |                           |            | +      | +                                    |         |      |      | +              |      |       |                |                |  | +         | +   |                |                     |                 |          |                      |                            |                | _                    | H            | +                | +  | ╞        | F                      |           |                                  |
|   | $\mathcal{A}$                     |                  |  | $\square$ |                           |            | +      | +                                    |         |      |      |                |      |       |                |                |  |           | $\frac{1}{2}$   |                |                     |                 |          |                      |                            |                |                      | $\Box$       | $\frac{1}{2}$    |  | +        |                        |           |                                  |
| Relinquished by<br>Rezanne Johnson                      | Date: Time:                       | Receiv           | am   | ari       | 16                        | Mal        | K      | ell                                  | Date    | 7-4  | Time | 1              | 4:   | 25    | Fax            | Res            | Resu                                     | lts       |   | Ye<br>Ye       |                     |                 | No<br>No | 7                    | Add                        | ition          | al F                 | Fax N        | Jum              | ber:   |          |                        |           |                                  |
| Relinguished by:  |                                   |                  |  |           | ioora                     | tory Sta   |        |                                      |         |      | Time | <del>)</del> : |      |       | REN            |                | KS:<br>ail R                             | esul      | lts:  | -              |                     |                 |          |                      | vd.c                       |                |                      |              |                  |  |          |                        |           |                                  |
|   | Circle One)<br>IPS - Bus - Other: | Sample           | Conditi<br>Yes<br>No   | Cool      | Yes<br>No                 |            | (1     | Initials                             | 5)      | BY:  |      |                |      |       |                |                |  |           |   | ro             | zai                 | ne              | 11(      | Q.W                  | inds                       | stre           | am                   | <u>n.ne</u>  | <u>t</u>         |  |          |                        |           |                                  |



December 04, 2019

KATIE JONES Rice Operating Company 112 W. Taylor Hobbs, NM 88240

RE: VACUUM F-34 VENT

Enclosed are the results of analyses for samples received by the laboratory on 11/21/19 12:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 11/21/2019                      | Sampling Date:      | 11/20/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 12/04/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

## Sample ID: MONITOR WELL #1 (H903953-01)

| BTEX 8021B                           | •<br>mg/ | L               | Analyze    | d By: MS     |       |            |               |       |           |
|--------------------------------------|----------|-----------------|------------|--------------|-------|------------|---------------|-------|-----------|
| Analyte                              | Result   | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Benzene*                             | <0.001   | 0.001           | 11/24/2019 | ND           | 0.019 | 96.8       | 0.0200        | 0.956 |           |
| Toluene*                             | < 0.001  | 0.001           | 11/24/2019 | ND           | 0.019 | 93.7       | 0.0200        | 0.628 |           |
| Ethylbenzene*                        | < 0.001  | 0.001           | 11/24/2019 | ND           | 0.019 | 95.4       | 0.0200        | 0.648 |           |
| Total Xylenes*                       | <0.003   | 0.003           | 11/24/2019 | ND           | 0.058 | 95.9       | 0.0600        | 0.741 |           |
| Total BTEX                           | <0.006   | 0.006           | 11/24/2019 | ND           |       |            |               |       |           |
| Surrogate: 4-Bromofluorobenzene (PID | 97.8 9   | 58.2-13         | 3          |              |       |            |               |       |           |
| Chloride, SM4500Cl-B                 | mg/      | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result   | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Chloride*                            | 276      | 4.00            | 11/22/2019 | ND           | 104   | 104        | 100           | 0.00  |           |
| Sulfate 375.4                        | mg/      | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result   | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| Sulfate*                             | 55.6     | 10.0            | 11/24/2019 | ND           | 22.9  | 114        | 20.0          | 1.41  |           |
| TDS 160.1                            | mg/      | L               | Analyze    | d By: AC     |       |            |               |       |           |
| Analyte                              | Result   | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |
| TDS*                                 | 737      | 5.00            | 11/26/2019 | ND           | 523   | 99.2       | 527           | 2.39  |           |
|                                      |          |                 |            |              |       |            |               |       |           |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company KATIE JONES 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

| Received:         | 11/21/2019                      | Sampling Date:      | 11/20/2019     |
|-------------------|---------------------------------|---------------------|----------------|
| Reported:         | 12/04/2019                      | Sampling Type:      | Water          |
| Project Name:     | VACUUM F-34 VENT                | Sampling Condition: | Cool & Intact  |
| Project Number:   | NOT GIVEN                       | Sample Received By: | Tamara Oldaker |
| Project Location: | T17S-R35E-SEC34 F - LEA CTY, NM |                     |                |

#### Sample ID: MONITOR WELL #2 (H903953-02)

| BTEX 8021B                           | mg/                    | L               | Analyze    | d By: MS     |       |            |               |       |           |  |  |
|--------------------------------------|------------------------|-----------------|------------|--------------|-------|------------|---------------|-------|-----------|--|--|
| Analyte                              | Result                 | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |  |  |
| Benzene*                             | <0.001 0.001           |                 | 11/24/2019 | ND           | 0.019 | 96.8       | 0.0200        | 0.956 |           |  |  |
| Toluene*                             | < 0.001                | 0.001           | 11/24/2019 | ND           | 0.019 | 93.7       | 0.0200        | 0.628 |           |  |  |
| Ethylbenzene*                        | < 0.001                | 0.001           | 11/24/2019 | ND           | 0.019 | 95.4       | 0.0200        | 0.648 |           |  |  |
| Total Xylenes*                       | <0.003                 | 0.003           | 11/24/2019 | ND           | 0.058 | 95.9       | 0.0600        | 0.741 |           |  |  |
| Total BTEX                           | <0.006                 | 0.006           | 11/24/2019 | ND           |       |            |               |       |           |  |  |
| Surrogate: 4-Bromofluorobenzene (PID | zene (PID 97.5 % 58.2- |                 | 3          |              |       |            |               |       |           |  |  |
| Chloride, SM4500Cl-B                 | mg/                    | L               | Analyze    | d By: AC     |       |            |               |       |           |  |  |
| Analyte                              | Result                 | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |  |  |
| Chloride*                            | <b>64.0</b> 4.00       |                 | 11/22/2019 | ND           | 104   | 104        | 100           | 0.00  |           |  |  |
| Sulfate 375.4                        | mg/                    | L               | Analyze    | d By: AC     |       |            |               |       |           |  |  |
| Analyte                              | Result                 | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |  |  |
| Sulfate*                             | 55.1                   | 10.0            | 11/24/2019 | ND           | 22.9  | 114        | 20.0          | 1.41  |           |  |  |
| TDS 160.1                            | mg/                    | L               | Analyze    | d By: AC     |       |            |               |       |           |  |  |
| Analyte                              | Result                 | Reporting Limit | Analyzed   | Method Blank | BS    | % Recovery | True Value QC | RPD   | Qualifier |  |  |
| TDS*                                 | <b>407</b> 5.00        |                 | 11/27/2019 | ND           | 515   | 97.7       | 527           | 15.3  |           |  |  |

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



## **Notes and Definitions**

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

### **Cardinal Laboratories**

## \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

| 3ge 5 of 5  | 4   |   |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      | Pa                               | ge_                     | _1                          |          | of                     | 1         | _                           |
|---|---|---|--|------------------|---|---|---------|------------------------------|-------------------------------|-----------------------------------|---------------------------------------|--------------------------------|-------------|---------|--------------------------|------------------------------|--|-----------|--|----------------|---------------------|-----------------|-----|----------------------|------------------|----------------|----------------------|----------------------------------|-------------------------|-----------------------------|----------|------------------------|-----------|-----------------------------|
| 101 East Marland - Hobbs, NM 88240<br>Tel (575) 393-2326<br>Cardinal Laboratories, Inc. |   |   |  |                  |   |   |         |                              |                               |                                   | CHAIN-OF-CUSTODY AND ANALYSIS REQUEST |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Fax (575) 39  | 3-2476  | 1166.                                       |  |                  |   | <b>)</b>  |         |                              |                               | 00                                | 9                                     |                                |             |         | LAB Order ID #           |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Company Name:   |   |   | BILL T   |                  | Com   | 100 C | ~       |                              |                               |                                   | P                                     | PO#                            |             |         | 1                        |                              |  |           |  | A              |                     |                 | SIS | RF                   | =01              | IES            | ٠т                   |                                  |                         |                             |          |                        |           |                             |
| RICE Opera<br>Project Manager:  | RICE Operating Company  |   |  |                  |   |   |         |                              |                               |                                   |                                       | (Circle or Specify Method No.) |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   | Katie Jones   |   |  |                  |   |   |         | Address: (Street, City, Zip) |                               |                                   |                                       |                                |             |         |                          |                              |  |           | T  | 1              | 1                   |                 | I   | ́п                   | 1                | 1              | 1                    | 1                                | L                       | н т                         | 1.1      | E                      | 1         |                             |
| Address: (Street, City, Zip)  |   |   |  |                  | 122 W Taylor Street ~ Hobbs, New Mexico 88240 |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   |   |   |  |                  | Phone#: Fax#:<br>(575) 303 0174 (575)307 1471 |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           | 0.7  |                |                     |                 |     |                      | - 1              |                |                      |                                  |                         |                             |          |                        |           |                             |
| 122 W Taylor Street ~ Hobbs, New Mexico 88240 Phone #: Fax #:                           |   |   |  |                  | (575) 393-9174 (575)397-1471                  |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           | B/20   | 1              |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| (575) 393-9   | 174   | (575)                                       | ) 397-   | 147              | 1   |   |         |                              |                               |                                   |                                       | ~                              |             |         | 1                        |                              | C35                                      |           | 010  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Project #:  | Project Name:   |   |  |                  | <u></u>                                       |   |         | /                            | /                             | 9                                 | 1                                     |                                |             |         |                          |                              | ) pa                                     |           | 9 6  | ß              |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   | Vacuum F-34 Vent  |   |  |                  |   |   | /       |                              | /                             | /                                 | 1                                     | -                              |             |         |                          |                              | ende                                     |           | Set  | 20             |                     |                 |     | - 23                 |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Project Location:   |   |   | Sampler Signature: Rozanne Johnson (575)631-9310 |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         | 1                        | Ext                          |  | Pa        | 2  |                |                     |                 |     | 5                    |                  |                |                      |                                  | (2)                     |                             |          |                        | s         |                             |
| 117S-R35E   | -Sec34 F ~ Lea County New Me  |   |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             | 005     |                          | 5 3                          | 3  |           |  |                |                     | 8270C/625       |     |                      |                  |                | ę                    |                                  |                         |                             | Hou      |                        |           |                             |
|   |   |   |  |                  | MA  | TRI   | (       | C                            | PRESERVATIVE<br>METHOD SAMPLI |                                   |                                       |                                |             | PLING   |                          |                              | TX1                                      |           | 20   | 5<br>B         |                     |                 |     | 54                   | 202              |                | _                    |                                  | 2                       | 3, 1                        |          | s                      |           | 24                          |
| H903953   | FIELD CODE  | C)omp                                       | INERS  | П                |   |   |         | (NOA)                        | IV                            |                                   |                                       |                                | 6)          |         | B/602                    | B/602                        | TX1005/                                  | 0         | Ag As Ba   | e ky ka p      | Volatiles           | cides           |     | 8260B/62             | ni. Vol. 82      | 2/608          | 3081A/608            | pH                               | a Ma. Na                | S04, CO                     |          | Ived Solic             |           | d Time ∼                    |
| ( LAB USE )   |   | (G)rab or (C)omp                            | # CONTAINERS                                     | WATER            | SOIL  | AIR   | SLUDGE  | HCL (2 40ml VOA)             | HNO <sub>3</sub>              | NaHSO4                            | 2004                                  | ICE (1-1Liter HDPE)<br>NONE    | DATE (2019) | TIME    | MTBE 8021B/602           | BTEX 8021B/602               | TPH 418.1/TX1005 / TX1005 Extended (C35) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7<br>Tri b Motole Ag As Ba Cd Cr Bb So Hg | TCLP Volatiles | TCLP Semi Volatiles | TCLP Pesticides | RCI | GC/MS Vol. 8260B/624 | GC/MS Semi. Vol. | PCB's 8082/608 | Pesticides 8081A/608 | BOD, TSS, pH<br>Moisture Content | Cations (Ca, Mg, Na, K) | Anions (CI, SO4, CO3, HCO3) | Sulfates | Total Dissolved Solids | Chlorides | Turn Around Time ~ 24 Hours |
| 1   | Monitor Well #1   | G   | -+=  | X                | 0)  | 4   | <u></u> | 2                            | -                             | 2 -                               |                                       | 1                              | -           | 0 10:15 | -                        | X                            | F  |           |  | ╧┼╴            | F                   |                 | E I | 0                    |                  |                | -                    |                                  | 10                      |                             |          |                        | x         | <u> </u>                    |
| 2   | and the second se |   |  |                  |   |   |         |                              | _                             |                                   |                                       | -                              |             |         | -                        |                              |  |           | +  | +              | +                   | $\vdash$        |     | $\rightarrow$        | +                | +              | +                    | +                                | +                       | +                           | -        |                        | -         | _                           |
|   | Monitor Well #2   | G   | 3  | X                | _   |   |         | 2                            | _                             | _                                 | +                                     | 1                              | 11/20       | 13:15   | -                        | X                            | -  |           | +  | +              | -                   |                 |     | $\rightarrow$        | +                | +              | +                    |                                  | ┿                       | +                           | X        | X                      | X         |                             |
|   |   |   |  | $\square$        |   | _   | _       | $\square$                    |                               | _                                 | -                                     | -                              |             |         |                          | -                            | -  |           | +  | +              | +                   |                 |     | $\rightarrow$        | +                | +              | $\rightarrow$        |                                  | +                       | $\square$                   | $\vdash$ | _                      | _         |                             |
|   |   |   |  | $\left  \right $ |   |   | _       |                              |                               |                                   | +                                     |                                |             |         | -                        | -                            | -  |           | +  | +              | -                   |                 |     | -                    | -                | _              | $\dashv$             | -+                               | +                       | $\square$                   | Н        | $\rightarrow$          |           |                             |
|   |   |   | ļ  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          | 1                            |  |           |  | $\perp$        |                     |                 |     |                      |                  |                | $\downarrow$         |                                  | $\perp$                 |                             | Ц        |                        |           |                             |
|   |   |   |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   |   |   |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   |   |   |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   |   |   |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             | Π        |                        |           |                             |
|   |   |   |  |                  |   |   |         |                              |                               |                                   | Τ                                     |                                |             | 1       |                          |                              |  |           | Τ  | Τ              |                     |                 |     |                      |                  |                | Τ                    |                                  | Τ                       | $\square$                   | Π        |                        | -         |                             |
| Relinquished by:  | Date: Time:   | Recei                                       | ved by:  |                  |   | 1   | 1 .     |                              | Da                            | ate:                              |                                       | Time:                          |             |         | Ph                       | one                          | Res                                      | ults      | T  | Y              | es                  |                 | No  |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Rezanne Johnson   | 16m 11/21/2019 12:55  | Janara Malakar 11-21-19 12:55               |  |                  |   |   |         |                              |                               | Fax                               | x Re                                  | sults                          |             | Т       | Y                        | es No Additional Fax Number: |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Relinquished by:  | Date: Time:   | Received By: (Laboratory Staff) Date: Time: |  |                  |   |   |         |                              | _                             |                                   | RKS                                   |                                |             | 1.0     |                          |                              | 140                                      |           | Aud  | tion           |                     |                 |     | 51.                  |                  |                |                      | _                                |                         |                             |          |                        |           |                             |
| 0.00.   | 0-  |   |  | 20               |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  | L.             | 0.00                |                 | Tio | 0.014                | id o             | 0.000          |                      |                                  |                         |                             |          |                        |           |                             |
| Delivered Day   |   | Sample Condition CHECKED BY:                |  |                  |   |   |         |                              |                               | Email Results: kjones@riceswd.com |                                       |                                |             |         |                          |                              |  |           |  |                | 1                   |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Delivered By: (   | (Circle One)  | Sample                                      | e Conditi  | On<br>Cool       | 1   | Intact  |         | CHE                          | =CKI                          | ED BY                             |                                       |                                |             |         | rozanne11@windstream.net |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
| Sampler - L   | JPS - Bus - Other:  | Yes Yes (Initials)<br>No No                 |  |                  |   |   |         |                              |                               |                                   |                                       |                                |             |         |                          |                              |  |           |  |                |                     |                 |     |                      |                  |                |                      |                                  |                         |                             |          |                        |           |                             |
|   |   |   | 110  |                  |   |   |         | 1 -                          | -                             | _                                 |                                       |                                | -           |         |                          |                              |  |           | -  |                |                     | -               |     |                      |                  |                |                      |                                  |                         | -                           | -        | _                      |           | _                           |