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District I

1625 N. French Drive

Hobbs, NM 88240

Subject: Site Assessment/Soil Remediation Work Plan for Lucy Federal #2, Lea County, New Mexico.

On behalf of Read and Stevens, Inc. Republic Backhoe Service, LLC. (RBS) prepared this Release Notification, Site Assessment / Work Plan, and Closure Report associated with Lucy Federal #2. The site is located in Unit L, Section 14, Township 20 South, Range 24 East, NMNM78273, Lea County, New Mexico, on private land. Attachment #1 and #2 illustrates the vicinity and location of the site. Eolian and Piedmont deposits from the Holocene to the Pleistocene age make up the subsurface of the area ([mrddata.usgs.gov](http://mrddata.usgs.gov), Table 7). The surface is comprised of Pyote and Maljamar soils, which consist of light brown fine sand. In places, it is loamy fine sand. The subsoil is fine loam about 18 inches thick. It is reddish yellow in the upper part and light brown in the lower part. The substratum, at a depth of 48 to 60 inches, is pink fine sandy loam. Indurated caliche is found at depths greater than 4 feet (Soil Survey Lea County 1974). The site is not within a 100-year floodplain (FEMA FIRMetete Map, Attachment #5). The surface is privately owned by Kenneth Smith.

Table 1. below, summarizes information regarding the release.

### Nature and Volume of Release

| Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below) |  |  |
|---|--|--|
| <input type="checkbox"/> Crude Oil  | Volume Released (bbls)   | Volume Recovered (bbls)                                  |
| <input checked="" type="checkbox"/> Produced Water  | Volume Released (bbls) <b>100 bbls</b>   | Volume Recovered (bbls) <b>4 bbls</b>                    |
|   | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate   | Volume Released (bbls)   | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas  | Volume Released (Mcf)  | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)   | Volume/Weight Released (provide units)   | Volume/Weight Recovered (provide units)                  |
| Cause of Release<br><b>Lightning struck by the water tanks and caused an explosion and fire.</b>                              |  |  |

### Regulatory Guidelines

New Mexico Oil Conservation Division (NMOCD) regulates surface impacts from unauthorized releases of crude oil, gases, produced water, condensate or other oil field waste in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). In accordance to NMAC 19.15.29 the Lucy Federal #2 is assessed by the following guidelines: Table 2 below.

### Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

|   |   |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release?   | 185 (ft bgs)  |
| Did this release impact groundwater or surface water?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site?   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

## Groundwater Depth

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater within 2,000 meters (Attachment #4). The search was inconclusive. Depth to ground water is 185' bgs (Information obtained from private landowner Kenneth Smith).

## Wellhead Protection Area

A search of a groundwater database maintained by NMOSE identified registered wells within 2,000 meters of the release at the site (Attachment #3). The search determined that the nearest registered water well is 1,050'.

## Closure Criteria

According to ground water depth findings and distance of nearest wells, the following table explains the NMOCD permissible levels for the site: Table 3 below.

| Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS | Constituent       | Method*                          | Limit**      |
|---|-------------------|----------------------------------|--------------|
| ≤ 50 feet   | Chloride***       | EPA 300.0 or SM4500 Cl B         | 600 mg/kg    |
|   | TPH (GRO+DRO+MRO) | EPA SW-846 Method 8015M          | 100 mg/kg    |
|   | BTEX              | EPA SW-846 Method 8021B or 8260B | 50 mg/kg     |
|   | Benzene           | EPA SW-846 Method 8021B or 8260B | 10 mg/kg     |
| 51 feet-100 feet  | Chloride***       | EPA 300.0 or SM4500 Cl B         | 10,000 mg/kg |
|   | TPH (GRO+DRO+MRO) | EPA SW-846 Method 8015M          | 2,500 mg/kg  |
|   | GRO+DRO           | EPA SW-846 Method 8015M          | 1,000 mg/kg  |
|   | BTEX              | EPA SW-846 Method 8021B or 8260B | 50 mg/kg     |
|   | Benzene           | EPA SW-846 Method 8021B or 8260B | 10 mg/kg     |
| >100 feet   | Chloride***       | EPA 300.0 or SM4500 Cl B         | 20,000 mg/kg |
|   | TPH (GRO+DRO+MRO) | EPA SW-846 Method 8015M          | 2,500 mg/kg  |
|   | GRO+DRO           | EPA SW-846 Method 8015M          | 1,000 mg/kg  |
|   | BTEX              | EPA SW-846 Method 8021B or 8260B | 50 mg/kg     |
|   | Benzene           | EPA SW-846 Method 8021B or 8260B | 10 mg/kg     |

\*Or other test methods approved by the division.

\*\*Numerical limits or natural background level, whichever is greater.

\*\*\*This applies to releases of produced water or other fluids, which may contain chloride.

[19.15.29.12 NMAC - N, 8/14/2018]

### **Site Assessment/Delineation**

On October 02, 2019, RBS went to the location to delineate the site. The release poses no threat to ground water as laboratory results concluded that no TPH/Benzene/BTEX/Chloride concentrations were found at 4' (bgs). Furthermore, soil samples collected and analyzed at 5' (bgs) show constituent level significantly lower than NMOCD permissible levels. A backhoe was used to dig a total of 23 trenches at the site. Samples were collected at 2 feet (bgs), 3 feet (bgs), 4 feet (bgs), 6 feet (bgs), 8 feet (bgs), 10 feet (bgs), and 12 feet (bgs). The following table summarizes the laboratory analytical results from the soil samples collected during the site assessment. Table 4 below.

**Site Assessment Soil Samples:  
Laboratory Analytical Result  
(Table 4)**

## Laboratory Analysis (Table 4)

| Name  | Date       | Depth | Chloride | TPH | BTEX  | Lithology | Soil | Pad/Pasture | GPS         |
|-------|------------|-------|----------|-----|-------|-----------|------|-------------|-------------|
| A-2   | 10/08/2019 | 2     | 3160     | --  | --    | Sandy     | ML   | Pad         | 32.570980   |
| A-4   | 10/08/2019 | 4     | 128      | --  | --    | Loam      | CL   |             | -103.538071 |
| A-6   | 10/08/2019 | 6     | 96       | --  | --    | Caliche   | GM   |             |             |
| A-8   | 10/08/2019 | 8     | 64       | --  | --    | Caliche   | GM   |             |             |
| A-10  | 10/08/2019 | 10    | 32       | --  | --    | Caliche   | GM   |             |             |
| B-2   | 10/08/2019 | 2     | 2560     | --  | --    | Sandy     | ML   | Pad         | 32.571018   |
| B3-3  | 10/21/2019 | 3     | 528      | --  | --    | Loam      | CL   |             | -103.538281 |
| B-4   | 10/08/2019 | 4     | 48       | --  | --    | Caliche   | GM   |             |             |
| B-6   | 10/08/2019 | 6     | 48       | --  | --    | Caliche   | GM   |             |             |
| B-8   | 10/08/2019 | 8     | 96       | --  | --    | Caliche   | GM   |             |             |
| B-10  | 10/08/2019 | 10    | <16      | --  | --    | Caliche   | GM   |             |             |
| BB-2  | 10/17/2019 | 2     | 2880     | <10 | <0.30 | Sandy     | ML   | Pad         | 32.571018   |
| BB-4  | 10/17/2019 | 4     | 320      | <10 | <0.30 | Loam      | CL   |             | -103.538281 |
| BB-5  | 10/17/2019 | 5     | 80       | <10 | <0.30 | Caliche   | GM   |             |             |
| BB-10 | 10/17/2019 | 10    | 112      | <10 | <0.30 | Caliche   | GM   |             |             |
| C-2   | 10/08/2019 | 2     | 4640     | --  | --    | Sandy     | ML   | Pad         | 32.571018   |
| C-4   | 10/08/2019 | 4     | 440      | --  | --    | Loam      | CL   |             | -103.538522 |
| C-6   | 10/08/2019 | 6     | 64       | --  | --    | Caliche   | GM   |             |             |
| C-8   | 10/08/2019 | 8     | 32       | --  | --    | Caliche   | GM   |             |             |
| C-10  | 10/08/2019 | 10    | 16       | --  | --    | Caliche   | GM   |             |             |
| CC-2  | 10/17/2019 | 2     | 208      | <10 | <0.30 | Sandy     | ML   | Pad         | 32.571018   |
| CC-4  | 10/17/2019 | 4     | 16       | <10 | <0.30 | Loam      | CL   |             | -103.538522 |
| CC-5  | 10/17/2019 | 5     | 16       | <10 | <0.30 | Caliche   | GM   |             |             |
| CC-10 | 10/17/2019 | 10    | 32       | <10 | <0.30 | Caliche   | GM   |             |             |
| D-2   | 10/08/2019 | 2     | 3320     | --  | --    | Sandy     | ML   | Pad         | 32.571081   |
| D-4   | 10/08/2019 | 4     | 496      | --  | --    | Loam      | CL   |             | -103.538403 |
| D-6   | 10/08/2019 | 6     | 160      | --  | --    | Caliche   | GM   |             |             |
| D-8   | 10/08/2019 | 8     | 272      | --  | --    | Caliche   | GM   |             |             |
| D-10  | 10/08/2019 | 10    | 384      | --  | --    | Caliche   | GM   |             |             |
| DD-2  | 10/17/2019 | 2     | 1120     | <10 | <0.30 | Sandy     | ML   | Pad         | 32.571081   |
| DD-4  | 10/17/2019 | 4     | 560      | <10 | <0.30 | Loam      | CL   |             | -103.538403 |
| DD-5  | 10/17/2019 | 5     | 544      | <10 | <0.30 | Caliche   | GM   |             |             |
| DD-10 | 10/17/2019 | 10    | 208      | <10 | <0.30 | Caliche   | GM   |             |             |
| E-2   | 10/08/2019 | 2     | 4080     | --  | --    | Sandy     | ML   | Pad         | 32.571021   |
| E-4   | 10/08/2019 | 4     | 720      | --  | --    | Loam      | CL   |             | -103.538135 |
| E-6   | 10/08/2019 | 6     | 160      | --  | --    | Caliche   | GM   |             |             |
| E-8   | 10/08/2019 | 8     | 16       | --  | --    | Caliche   | GM   |             |             |
| E-10  | 10/08/2019 | 10    | 32       | --  | --    | Caliche   | GM   |             |             |
| F-2   | 10/08/2019 | 2     | 4200     | --  | --    | Sandy     | ML   | Pasture     | 32.570950   |
| F-4   | 10/08/2019 | 4     | 1010     | --  | --    | Loam      | CL   |             | -103.538260 |
| F-6   | 10/08/2019 | 6     | 1310     | --  | --    | Caliche   | GM   |             |             |
| F-8   | 10/08/2019 | 8     | 928      | --  | --    | Caliche   | GM   |             |             |
| F-10  | 10/08/2019 | 10    | 64       | --  | --    | Caliche   | GM   |             |             |
| G-2   | 10/08/2019 | 2     | 1920     | --  | --    | Sandy     | ML   | Pad         | 32.570979   |
| G-4   | 10/08/2019 | 4     | 208      | --  | --    | Loam      | CL   |             | -103.538460 |
| G-6   | 10/08/2019 | 6     | 32       | --  | --    | Caliche   | GM   |             |             |

| Name  | Date       | Depth | Chloride | TPH | BTEX | Lithology | Soil | Pad/Pasture | GPS         |
|-------|------------|-------|----------|-----|------|-----------|------|-------------|-------------|
| G-8   | 10/08/2019 | 8     | 16       | --  | --   | Caliche   | GM   |             |             |
| G-10  | 10/08/2019 | 10    | 16       | --  | --   | Caliche   | GM   |             |             |
| H-2   | 10/14/2019 | 2     | 16       | --  | --   | Sandy     | ML   | Pasture     | 32.570967   |
| H-4   | 10/14/2019 | 4     | <16      | --  | --   | Loam      | CL   |             | -103.538360 |
| H-6   | 10/14/2019 | 6     | 32       | --  | --   | Caliche   | GM   |             |             |
| H-8   | 10/14/2019 | 8     | 272      | --  | --   | Caliche   | GM   |             |             |
| H-10  | 10/14/2019 | 10    | 64       | --  | --   | Caliche   | GM   |             |             |
| I-2   | 10/14/2019 | 2     | 1400     | --  | --   | Sandy     | ML   | Pasture     | 32.570889   |
| I-3   | 10/21/2019 | 3     | 480      | --  | --   | Loam      | CL   |             | -103.538508 |
| I-4   | 10/14/2019 | 4     | 48       | --  | --   | Loam      | CL   |             |             |
| I-6   | 10/14/2019 | 6     | 96       | --  | --   | Caliche   | GM   |             |             |
| I-8   | 10/14/2019 | 8     | 16       | --  | --   | Caliche   | GM   |             |             |
| I-10  | 10/14/2019 | 10    | 64       | --  | --   | Caliche   | GM   |             |             |
| J-2   | 10/14/2019 | 2     | 320      | --  | --   | Sandy     | ML   | Pad         | 32.571033   |
| J-4   | 10/14/2019 | 4     | 176      | --  | --   | Loam      | CL   |             | -103.538595 |
| J-6   | 10/14/2019 | 6     | 208      | --  | --   | Caliche   | GM   |             |             |
| J-8   | 10/14/2019 | 8     | 32       | --  | --   | Caliche   | GM   |             |             |
| J-10  | 10/14/2019 | 10    | 16       | --  | --   | Caliche   | GM   |             |             |
| K-2   | 10/14/2019 | 2     | 96       | --  | --   | Sandy     | ML   | Pad         | 32.571251   |
| K-4   | 10/14/2019 | 4     | 16       | --  | --   | Loam      | CL   |             | -103.538897 |
| K-6   | 10/14/2019 | 6     | 161      | --  | --   | Caliche   | GM   |             |             |
| K-8   | 10/14/2019 | 8     | 304      | --  | --   | Caliche   | GM   |             |             |
| K-10  | 10/14/2019 | 10    | 32       | --  | --   | Caliche   | GM   |             |             |
| L-2   | 10/14/2019 | 2     | 32       | --  | --   | Sandy     | ML   | Pasture     | 32.571302   |
| L-4   | 10/14/2019 | 4     | 128      | --  | --   | Loam      | CL   |             | -103.538947 |
| L-6   | 10/14/2019 | 6     | 16       | --  | --   | Caliche   | GM   |             |             |
| L-8   | 10/14/2019 | 8     | <16      | --  | --   | Caliche   | GM   |             |             |
| L-10  | 10/14/2019 | 10    | <16      | --  | --   | Caliche   | GM   |             |             |
| M-2   | 10/14/2019 | 2     | 368      | --  | --   | Sandy     | ML   | Pad         | 32.571406   |
| M-4   | 10/14/2019 | 4     | 16       | --  | --   | Loam      | CL   |             | -103.538907 |
| M-6   | 10/14/2019 | 6     | 48       | --  | --   | Caliche   | GM   |             |             |
| M-8   | 10/14/2019 | 8     | 32       | --  | --   | Caliche   | GM   |             |             |
| M-10  | 10/14/2019 | 10    | 32       | --  | --   | Caliche   | GM   |             |             |
| M-12  | 10/14/2019 | 12    | 48       | --  | --   | Caliche   | GM   |             |             |
| N1-2  | 10/14/2019 | 2     | 1960     | --  | --   | Sandy     | ML   | Pasture     | 32.571268   |
| N1-3  | 10/21/2019 | 3     | 480      | --  | --   | Loam      | CL   |             | -103.539008 |
| N1-4  | 10/14/2019 | 4     | 16       | --  | --   | Loam      | CL   |             |             |
| N1-6  | 10/14/2019 | 6     | 64       | --  | --   | Caliche   | GM   |             |             |
| N1-8  | 10/14/2019 | 8     | 32       | --  | --   | Caliche   | GM   |             |             |
| N1-10 | 10/14/2019 | 10    | 16       | --  | --   | Caliche   | GM   |             |             |
| N1-12 | 10/14/2019 | 12    | 16       | --  | --   | Caliche   | GM   |             |             |
| N2-2  | 10/14/2019 | 2     | 1600     | --  | --   | Sandy     | ML   | Pasture     | 32.571383   |
| N2-3  | 10/21/2019 | 3     | 520      | --  | --   | Loam      | CL   |             | -103.539020 |
| N2-4  | 10/14/2019 | 4     | 16       | --  | --   | Loam      | CL   |             |             |
| N2-6  | 10/14/2019 | 6     | 16       | --  | --   | Caliche   | GM   |             |             |
| N2-8  | 10/14/2019 | 8     | 32       | --  | --   | Caliche   | GM   |             |             |
| N2-10 | 10/14/2019 | 10    | 32       | --  | --   | Caliche   | GM   |             |             |
| N2-12 | 10/14/2019 | 12    | 16       | --  | --   | Caliche   | GM   |             |             |
| O-2   | 10/14/2019 | 2     | <16      | --  | --   | Sandy     | ML   | Pad         | 32.571062   |

| Name | Date       | Depth | Chloride | TPH | BTEX | Lithology | Soil | Pad/Pasture | GPS         |
|------|------------|-------|----------|-----|------|-----------|------|-------------|-------------|
| O-4  | 10/14/2019 | 4     | 48       | --  | --   | Loam      | CL   |             | -103.538567 |
| O-6  | 10/14/2019 | 6     | 48       | --  | --   | Caliche   | GM   |             |             |
| O-8  | 10/14/2019 | 8     | 48       | --  | --   | Caliche   | GM   |             |             |
| O-10 | 10/14/2019 | 10    | 48       | --  | --   | Caliche   | GM   |             |             |
| O-12 | 10/14/2019 | 12    | 48       | --  | --   | Caliche   | GM   |             |             |
| P-2  | 10/14/2019 | 2     | <16      | --  | --   | Sandy     | ML   | Pad         | 32.571070   |
| P-4  | 10/14/2019 | 4     | 48       | --  | --   | Loam      | CL   |             | -103.538313 |
| P-6  | 10/14/2019 | 6     | 32       | --  | --   | Caliche   | GM   |             |             |
| P-8  | 10/14/2019 | 8     | 48       | --  | --   | Caliche   | GM   |             |             |
| P-10 | 10/14/2019 | 10    | 48       | --  | --   | Caliche   | GM   |             |             |
| P-12 | 10/14/2019 | 12    | 48       | --  | --   | Caliche   | GM   |             |             |
| Q-2  | 10/14/2019 | 2     | <16      | --  | --   | Sandy     | ML   | Pad         | 32.571069   |
| Q-4  | 10/14/2019 | 4     | 64       | --  | --   | Loam      | CL   |             | -103.538074 |
| Q-6  | 10/14/2019 | 6     | 48       | --  | --   | Caliche   | GM   |             |             |
| Q-8  | 10/14/2019 | 8     | 32       | --  | --   | Caliche   | GM   |             |             |
| Q-10 | 10/14/2019 | 10    | 48       | --  | --   | Caliche   | GM   |             |             |
| Q-12 | 10/14/2019 | 12    | 48       | --  | --   | Caliche   | GM   |             |             |
| R-2  | 10/14/2019 | 2     | 16       | --  | --   | Sandy     | ML   | Pasture     | 32.571027   |
| R-4  | 10/14/2019 | 4     | 48       | --  | --   | Loam      | CL   |             | -103.537980 |
| R-6  | 10/14/2019 | 6     | 32       | --  | --   | Caliche   | GM   |             |             |
| R-8  | 10/14/2019 | 8     | 48       | --  | --   | Caliche   | GM   |             |             |
| R-10 | 10/14/2019 | 10    | 48       | --  | --   | Caliche   | GM   |             |             |
| R-12 | 10/14/2019 | 12    | 48       | --  | --   | Caliche   | GM   |             |             |
| S-1  | 10/14/2019 | 1     | 16       | --  | --   | Sandy     | ML   | Pasture     | 32.570891   |
| S-4  | 10/14/2019 | 4     | 48       | --  | --   | Loam      | CL   |             | -103.538242 |
| S-6  | 10/14/2019 | 6     | 32       | --  | --   | Caliche   | GM   |             |             |
| S-8  | 10/14/2019 | 8     | 48       | --  | --   | Caliche   | GM   |             |             |
| S-10 | 10/14/2019 | 10    | 48       | --  | --   | Caliche   | GM   |             |             |
| S-12 | 10/14/2019 | 12    | 32       | --  | --   | Caliche   | GM   |             |             |

**Closure Soil Samples:  
Laboratory Analytical Results  
(Table 5)**

**Closure Samples:**

| Name   | Date       | Depth | Chloride | TPH | BTEX | Lithology | Soil | Pad/Pasture | GPS         |
|--------|------------|-------|----------|-----|------|-----------|------|-------------|-------------|
| N3-2   | 11/22/2019 | 2     | 352      | --  | --   | Sandy     | ML   | Pasture     | 32.571331   |
| N3-5   | 11/22/2019 | 5     | 784      | --  | --   | Loam      | CL   |             | -103.538997 |
| N3-10  | 11/22/2019 | 10    | 960      | --  | --   | Caliche   | GM   |             |             |
| N4-2   | 11/22/2019 | 2     | 176      | --  | --   | Sandy     | ML   | Pasture     | 32.571335   |
| N4-5   | 11/22/2019 | 5     | 96       | --  | --   | Loam      | CL   |             | -103.539046 |
| N4-10  | 11/22/2019 | 10    | 240      | --  | --   | Caliche   | GM   |             |             |
| 1A-2   | 11/25/2019 | 2     | 16       | --  | --   | Sandy     | ML   | Pasture     | 32.570890   |
| 1A-5   | 11/25/2019 | 5     | 80       | --  | --   | Loam      | CL   |             | -103.538297 |
| 1A-10  | 11/25/2019 | 10    | 64       | --  | --   | Caliche   | GM   |             |             |
| 2A-2   | 11/25/2019 | 2     | 432      | --  | --   | Sandy     | ML   | Pasture     | 32.570942   |
| 2A-5   | 11/25/2019 | 5     | 96       | --  | --   | Loam      | CL   |             | -103.538322 |
| 2A-10  | 11/25/2019 | 10    | 80       | --  | --   | Caliche   | GM   |             |             |
| 3A-2   | 11/25/2019 | 2     | 80       | --  | --   | Sandy     | ML   | Pasture     | 32.570905   |
| 3A-5   | 11/25/2019 | 5     | 992      | --  | --   | Loam      | CL   |             | -103.538461 |
| 3A-10  | 11/25/2019 | 10    | <16      | --  | --   | Caliche   | GM   |             |             |
| 4A-3   | 11/25/2019 | 3     | 352      | --  | --   | Sandy     | ML   | Pasture     | 32.570958   |
| 4A-5   | 11/25/2019 | 5     | 768      | --  | --   | Loam      | CL   |             | -103.538536 |
| 4A-10  | 11/25/2019 | 10    | 16       | --  | --   | Caliche   | GM   |             |             |
| 5A-2   | 11/25/2019 | 2     | 80       | --  | --   | Sandy     | ML   | Pasture     | 32.570907   |
| 5A-5   | 11/25/2019 | 5     | 64       | --  | --   | Loam      | CL   |             | -103.538559 |
| 5A-10  | 11/25/2019 | 10    | <16      | --  | --   | Caliche   | GM   |             |             |
| 6A-2   | 11/25/2019 | 2     | 48       | --  | --   | Sandy     | ML   | Pasture     | 32.570961   |
| 6A-5   | 11/25/2019 | 5     | 48       | --  | --   | Loam      | CL   |             | -103.538625 |
| 6A-10  | 11/25/2019 | 10    | 64       | --  | --   | Caliche   | GM   |             |             |
| 7A-2   | 11/25/2019 | 2     | 112      | --  | --   | Sandy     | ML   | Pad         | 32.571146   |
| 7A-5   | 11/25/2019 | 5     | 16       | --  | --   | Loam      | CL   |             | -103.538752 |
| 7A-10  | 11/25/2019 | 10    | <16      | --  | --   | Caliche   | GM   |             |             |
| 8A-4   | 11/25/2019 | 4     | 592      | --  | --   | Loam      | CL   | Pasture     | 32.570858   |
| 8A-5   | 11/25/2019 | 5     | 352      | --  | --   | Loam      | CL   |             | -103.538496 |
| 8A-10  | 11/25/2019 | 10    | 16       | --  | --   | Caliche   | GM   |             |             |
| 9A-2   | 11/25/2019 | 2     | 16       | --  | --   | Sandy     | ML   | Pasture     | 32.570851   |
| 9A-5   | 11/25/2019 | 5     | 16       | --  | --   | Loam      | CL   |             | -103.538251 |
| 9A-10  | 11/25/2019 | 10    | 16       | --  | --   | Caliche   | GM   |             |             |
| 10A-2  | 11/25/2019 | 2     | 80       | --  | --   | Sandy     | ML   | Pasture     | 32.570892   |
| 10A-5  | 11/25/2019 | 5     | <16      | --  | --   | Loam      | CL   |             | -103.538193 |
| 10A-10 | 11/25/2019 | 10    | 720      | --  | --   | Caliche   | GM   |             |             |
| 11A-2  | 11/25/2019 | 2     | 192      | --  | --   | Sandy     | ML   | Pasture     | 32.570934   |
| 11A-5  | 11/25/2019 | 5     | 320      | --  | --   | Loam      | CL   |             | -103.538115 |
| 11A-10 | 11/25/2019 | 10    | 304      | --  | --   | Caliche   | GM   |             |             |
| 12A-2  | 11/25/2019 | 2     | <16      | --  | --   | Sandy     | ML   | Pasture     | 32.570942   |
| 12A-5  | 11/25/2019 | 5     | 176      | --  | --   | Loam      | CL   |             | -103.537981 |
| 12A-10 | 11/25/2019 | 10    | 192      | --  | --   | Caliche   | GM   |             |             |
| 13A-2  | 11/25/2019 | 2     | 304      | --  | --   | Sandy     | ML   | Pasture     | 32.570989   |
| 13A-5  | 11/25/2019 | 5     | 272      | --  | --   | Loam      | CL   |             | -103.537968 |
| 13A-10 | 11/25/2019 | 10    | 224      | --  | --   | Caliche   | GM   |             |             |

| Name   | Date       | Depth | Chloride | TPH | BTEX | Lithology | Soil | Pad/Pasture | GPS         |
|--------|------------|-------|----------|-----|------|-----------|------|-------------|-------------|
| 14A-2  | 11/25/2019 | 2     | 304      | --  | --   | Sandy     | ML   | Pasture     | 32.571071   |
| 14A-5  | 11/25/2019 | 5     | 336      | --  | --   | Loam      | CL   |             | -103.537962 |
| 14A-10 | 11/25/2019 | 10    | 32       | --  | --   | Caliche   | GM   |             |             |
| 15A-2  | 11/25/2019 | 2     | 16       | --  | --   | Sandy     | ML   | Pasture     | 32.571099   |
| 15A-5  | 11/25/2019 | 5     | <16      | --  | --   | Loam      | CL   |             | -103.538004 |
| 15A-10 | 11/25/2019 | 10    | <16      | --  | --   | Caliche   | GM   |             |             |
| 16A-3  | 11/25/2019 | 3     | 48       | --  | --   | Loam      | CL   | Pasture     | 32.570951   |
| 16A-5  | 11/25/2019 | 5     | 496      | --  | --   | Loam      | CL   |             | -103.538035 |
| 16A-10 | 11/25/2019 | 10    | 256      | --  | --   | Caliche   | GM   |             |             |
| 17A-4  | 11/25/2019 | 4     | 320      | --  | --   | Loam      | CL   | Pasture     | 32.570945   |
| 17A-5  | 11/25/2019 | 5     | 848      | --  | --   | Loam      | CL   |             | -103.538428 |
| 17A-10 | 11/25/2019 | 10    | 2720     | --  | --   | Caliche   | GM   |             |             |

Soil Description (Table 6)

| Description   | USCS    | Porosity [-] |      |                | Reference        |
|---|---------|--------------|------|----------------|------------------|
|   |         | min          | max  | Specific value |                  |
| Well graded gravel, sandy gravel, with little or no fines           | GW      | 0.21         | 0.32 |                | [1].             |
| Poorly graded gravel, sandy gravel, with little or no fines         | GP      | 0.21         | 0.32 |                | [1].             |
| Silty gravels, silty sandy gravels                                  | GM      | 0.15         | 0.22 |                | [1].             |
| Gravel  | (GW-GP) | 0.23         | 0.38 |                | [2].             |
| Clayey gravels, clayey sandy gravels                                | GC      | 0.17         | 0.27 |                | [1].             |
| Glacial till, very mixed grained                                    | (GC)    | -            | -    | 0.20           | [4 cited in 5]   |
| Well graded sands, gravelly sands, with little or no fines          | SW      | 0.22         | 0.42 |                | [1], [2].        |
| Coarse sand   | (SW)    | 0.26         | 0.43 |                | [2].             |
| Fine sand   | (SW)    | 0.29         | 0.46 |                | [2].             |
| Poorly graded sands, gravelly sands, with little or no fines        | SP      | 0.23         | 0.43 |                | [1], [2].        |
| Silty sands   | SM      | 0.25         | 0.49 |                | [1], [2].        |
| Clayey sands  | SC      | 0.15         | 0.37 |                | [1].             |
| Inorganic silts, silty or clayey fine sands, with slight plasticity | ML      | 0.21         | 0.56 |                | [1].             |
| Uniform inorganic silt  | (ML)    | 0.29         | 0.52 |                | [3].             |
| Inorganic clays, silty clays, sandy clays of low plasticity         | CL      | 0.29         | 0.41 |                | [1].             |
| Organic silts and organic silty clays of low plasticity             | OL      | 0.42         | 0.68 |                | [1], [3].        |
| Silty or sandy clay   | (CL-OL) | 0.20         | 0.64 |                | [3].             |
| Inorganic silts of high plasticity                                  | MH      | 0.53         | 0.68 |                | [1].             |
| Inorganic clays of high plasticity                                  | CH      | 0.39         | 0.59 |                | [1].             |
| Soft glacial clay   | -       | -            | -    | 0.55           | [4 cited in 5]   |
| Stiff glacial clay  | -       | -            | -    | 0.38           | [4 cited in 5]   |
| Organic clays of high plasticity                                    | OH      | 0.50         | 0.75 |                | [1], [3].        |
| Soft slightly organic clay  | (OH-OL) | -            | -    | 0.66           | [4] cited in [5] |
| Peat and other highly organic soils                                 | Pt      | -            | -    |                | [4 cited in 5]   |
| soft very organic clay  | (Pt)    | -            | -    | 0.75           | [4] cited in [5] |

## REFERENCES

1. Swiss Standard SN 670 010b, Characteristic Coefficients of soils, Association of Swiss Road and Traffic Engineers
2. Das, B., Advanced Soil Mechanics. Taylor & Francis, London & New York, 2008.
3. Hough, B., Basic soil engineering. Ronald Press Company, New York, 1969.
4. Terzaghi, K., Peck, R., and Mesri, G., Soil Mechanics in Engineering Practice. Wiley, New York, 1996.
5. Obrzud R. & Truty, A. THE HARDENING SOIL MODEL - A PRACTICAL GUIDEBOOK Z Soil.PC 100701 report, revised 31.01.2012

Citation :  
Geotechdata.info, Soil void ratio, <http://geotechdata.info/parameter/soil-void-ratio.html> (as of November 16, 2013).

## Subsurface Geology (Table 7)

### Scientific data near [32.57192,-103.53942]

Search area extends approximately 1.0 km east-west and 1.0 km north-south.

[Narrower](#) [Wider](#) [JSON](#) [XML](#)

#### Geographic context

##### Counties, states, countries, continents, or oceans

|               |           |
|---------------|-----------|
| Lea           | county    |
| New Mexico    | state     |
| United States | country   |
| North America | continent |
| Land          | continent |

##### Map quadrangles, from USGS or Canadian NTS

|       |                            |
|-------|----------------------------|
| Lea   | quadrangle 1:24,000 scale  |
| Hobbs | quadrangle 1:100,000 scale |
| Hobbs | quadrangle 1:250,000 scale |

##### Watershed boundaries (USGS hydrologic units)

|                   |                            |
|-------------------|----------------------------|
| Upper Pecos-Black | hydrologic unit            |
| Upper Pecos       | hydrologic accounting unit |
| Upper Pecos       | hydrologic subregion       |
| Rio Grande        | hydrologic region          |

#### Geology of US states

Digital geologic maps of the US states with consistent lithology, age, GIS database structure, and format

[Database Home](#)

| Unit                         | State | Lithology                      |
|------------------------------|-------|--------------------------------|
| Eolian and piedmont deposits | NM    | Holocene to middle Pleistocene |

**Excavation Logs ( Table 8)**

Site Name: Lucy Fed #2 Date: 10/12/2019

Sample N<sup>1</sup>

Soil Profile

| Description | ft. bgs |
|-------------|---------|
| Top Soil    | 1       |
|             | 2       |
|             | 3       |
| Caliche     | 4       |
|             | 5       |
|             | 6       |
|             | 7       |
|             | 8       |
|             | 9       |
|             | 10      |
|             | 11      |
| Caliche     | 12      |
|             | 13      |
|             | 14      |



Site Name: Lucy Fed #2 Date: 10/07/2019  
Sample D

Soil Profile

| Description | ft. bgs |
|-------------|---------|
| Top Soil    | 1       |
|             | 2       |
|             | 3       |
| Caliche     | 4       |
|             | 5       |
|             | 6       |
|             | 7       |
|             | 8       |
|             | 9       |
| Caliche     | 10      |
|             | 11      |
|             | 12      |
|             | 13      |
|             | 14      |



## Remediation/ Closure

Commencement Date: October 02, 2019

Completion Date: December 05, 2019

The following remedial activities are in accordance with 19.15.29.12 NMAC, remediation of releases on oil well pads. The remedial activities took place on the Lucy Federal #2 pad and surrounding pasture near the release. The release poses no threat to ground water.

The preliminary site delineation began on October 4, 2019, and concluded that the vertical extent of the release was approximately 2 feet to 4 feet (bgs). Samples at 4 feet, 6 feet, 10 feet, and 12 feet (bgs) further confirmed these results. Sample F was contaminated at 4 feet (GPS 32.570950, -103.538260). An estimated 1,820 cubic yards were excavated from the location and hauled to an NMOCD approved disposal site (See Attachment 6)

On October 15, 2019, a conversation was had with the NMOCD Environmental Bureau Chief, Jim Griswold, in regards to completing remediation, and backfilling the excavated area on the pad in order to commence rebuilding of the tank battery at the location. Per this conversation, bottom hole samples were taken in the location where the battery was to be rebuilt to ensure NMOCD regulations are met, which included Chloride, BTEX, and THP testing results.

After reviewing bottom hole samples BB, CC, and DD, which were collected on the pad where the tank battery is intended to be rebuilt, it was determined that NMOCD closure criteria had been met. That area of the pad was then back filled, and the tank battery was rebuilt on the location.

On November 11, 2019, notice was given to NMOCD of intent to complete closure samples for the remainder of the excavated area in the pasture surrounding the location. After receiving results for closure samples N3, N4, and 1A through 17A it was determined that results met NMOCD closure criteria (See Table 5). An area of approximately 14,290 sq. feet was backfilled with approximately 1,520 yards of caliche, and covered with 1080 yards of top soil. Back fill material was hauled in from the land owner's property (See Attachment 7)

On October 4, 2019, trucks began hauling caliche to the location. Caliche hauling ended on October 22, 2019. Trucks began hauling top soil on October 24, 2019. Top soil hauling ended on November 18, 2019. The pasture will be seeded in the spring of 2020 with warm mixture seed, and was approved by the private landowner.

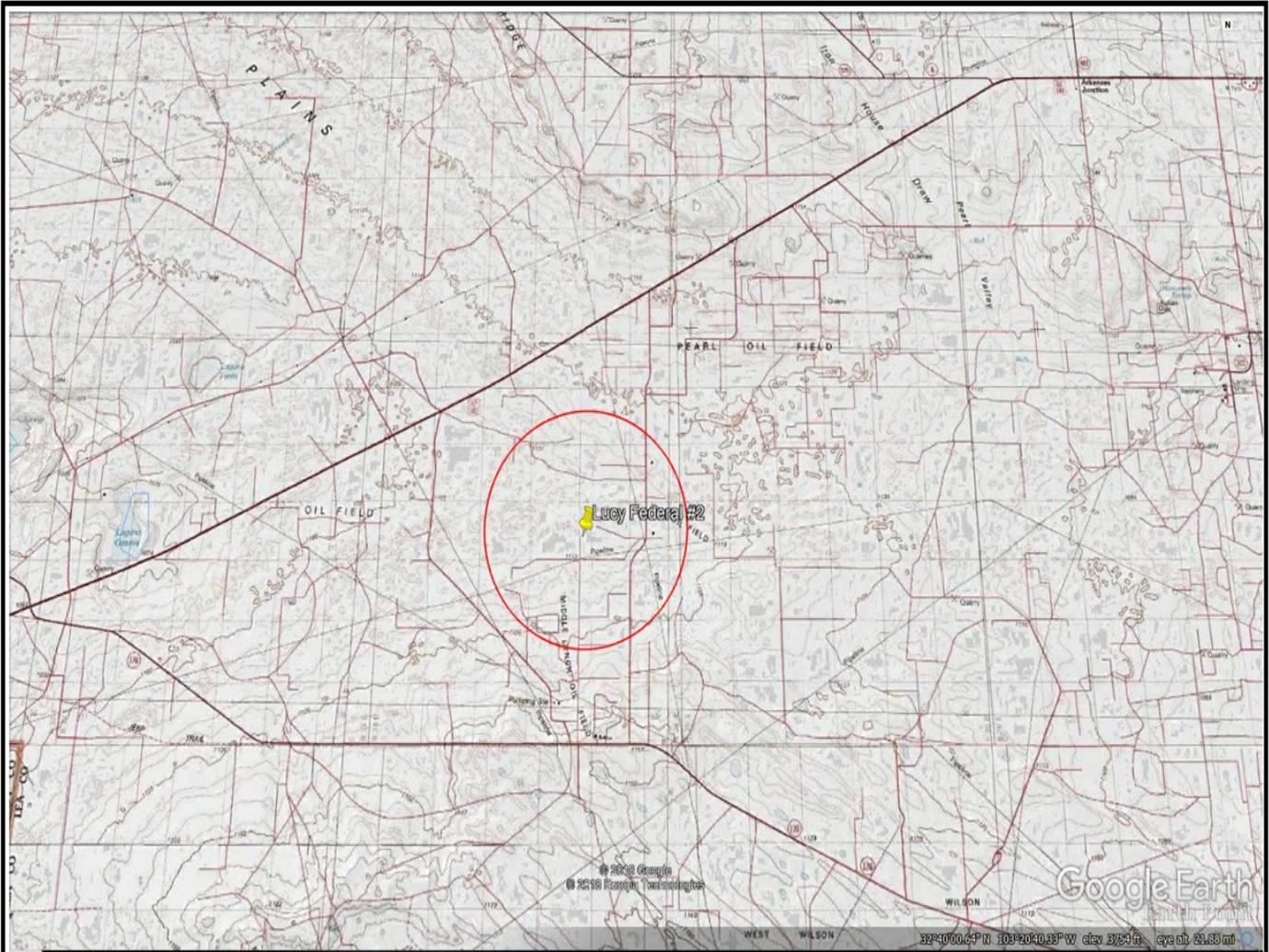


Eric Garcia  
Republic Backhoe Service, LLC



**Attachment #1 and #2:**

**Vicinity Maps**



**Read & Stevens Inc.**

**Lucy Federal #2**

**Section 14 T20S R34E 1980' FSL 330' FWL**

**GPS: 32.571347, -103.538483**

**Lea County, NM**

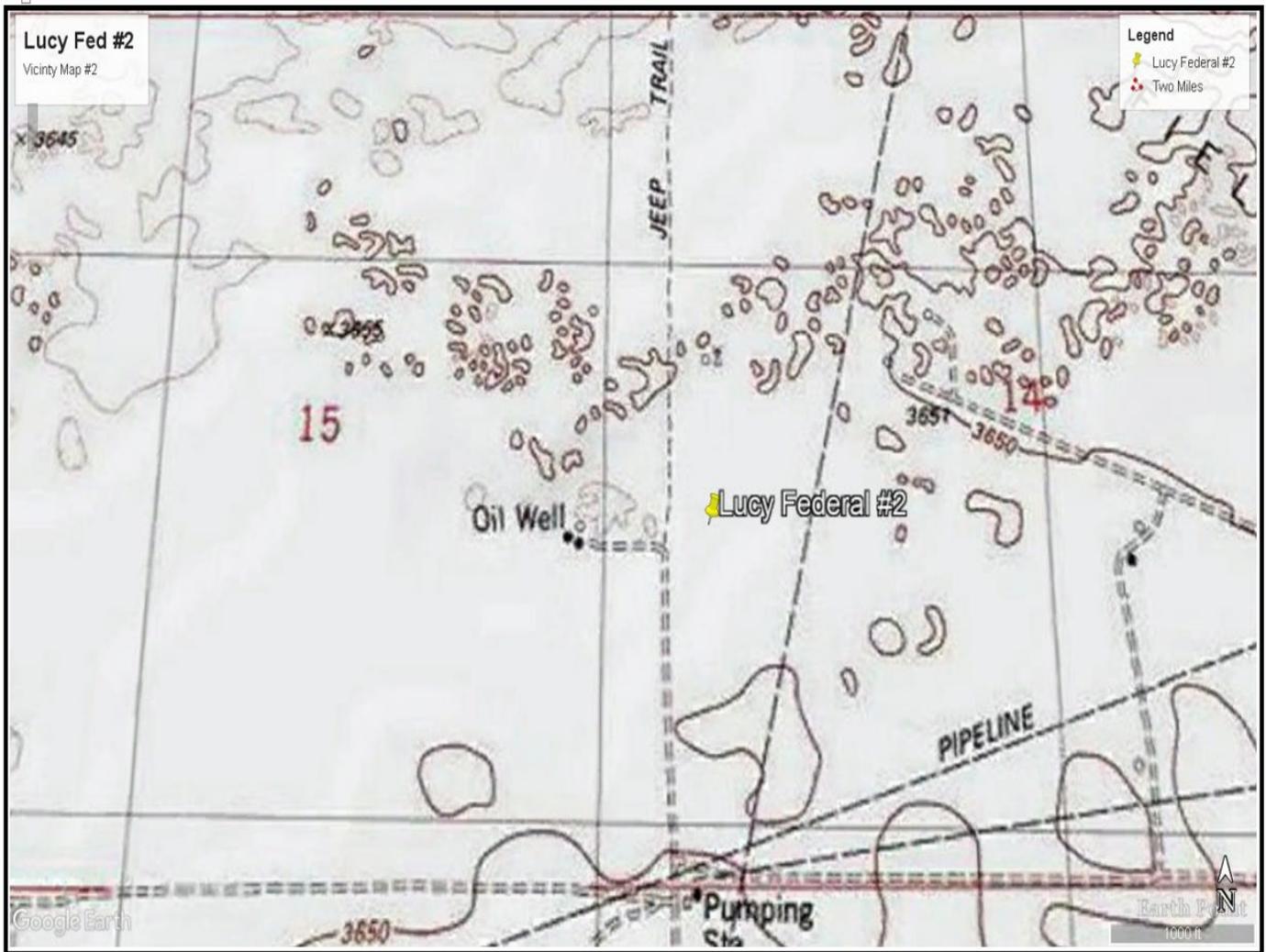
**Republic Backhoe Service, LLC**

**47 E. Dickens Rd.**

**Lovington, NM 88260**

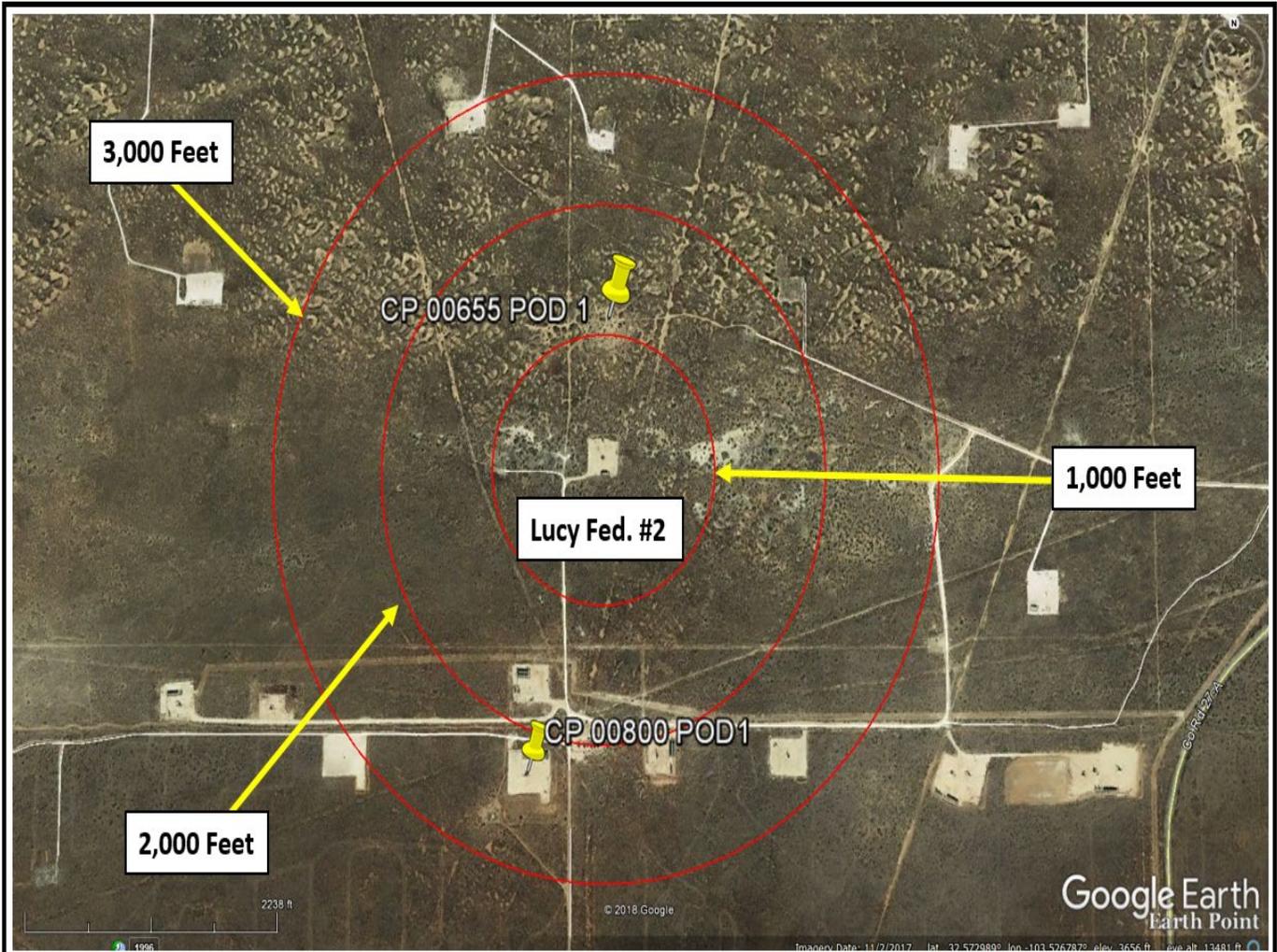
**Lucy Fed #2**

**Vicinity Map #1**



|   |  |  |
|---|--|--|
| <p>Read &amp; Stevens Inc.<br/>Lucy Federal #2<br/>Section 14 T20S R34E 1980' FSL 330' FWL<br/>GPS: 32.571347, -103.538483<br/>Lea County, NM</p> | <p>Republic Backhoe Service, LLC<br/>47 E. Dickens Rd.<br/>Lovington, NM 88260</p> | <p>Lucy Fed #2<br/>Vicinity Map #2</p> |
|---|--|--|

**Attachment #3:  
Nearest Pod Locations**



|   |  |  |
|---|--|--|
| <p>Read &amp; Stevens Inc.<br/>Lucy Federal #2<br/>Section 14 T20S R34E 1980' FSL 330' FWL<br/>GPS: 32.571347, -103.538483<br/>Lea County, NM</p> | <p>Republic Backhoe Service, LLC<br/>47 E. Dickens Rd.<br/>Lovington, NM 88260</p> | <p>Lucy Fed #2<br/>Fresh Water Wells</p> |
|---|--|--|

**Attachment #4:  
Average Depth to Water**



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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

| POD Number                    | Code | POD Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X      | Y        | Distance | Depth | Well | Depth | Water Column |
|-------------------------------|------|---------------|--------|------|------|-----|-----|-----|-----|--------|----------|----------|-------|------|-------|--------------|
| <a href="#">CP 00655 POD1</a> |      | CP            | LE     | 3    | 1    | 14  | 20S | 34E |     | 637294 | 3605108* | 443      |       | 210  |       |              |
| <a href="#">CP 00800 POD1</a> |      | CP            | LE     | 2    | 2    | 22  | 20S | 34E |     | 637007 | 3603994* | 707      |       | 220  |       |              |

Average Depth to Water: --  
Minimum Depth: --  
Maximum Depth: --

**Record Count:** 2

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 637201.235

**Northing (Y):** 3604674.111

**Radius:** 2500

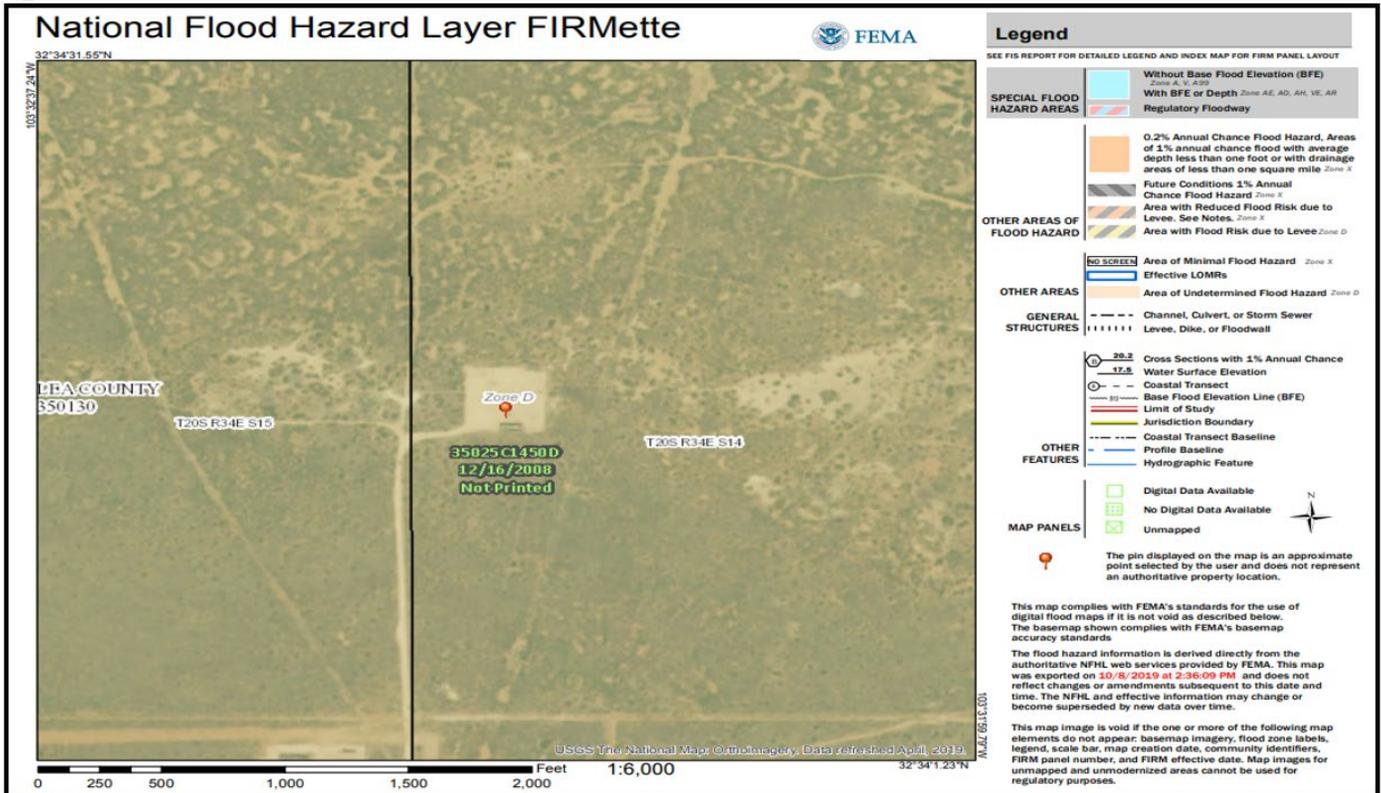
\*UTM location was derived from PLSS - see Help

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

10/8/19 11:33 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER.

**Attachment #5:  
National Flood Hazard Layer Firmette**



**Read & Stevens Inc.**

Lucy Federal #2

Section 14 T20S R34E 1980' FSL 330' FWL

GPS: 32.571347, -103.538483

Lea County, NM

**Republic Backhoe Service, LLC**

47 E. Dickens Rd.

Lovington, NM 88260

**Lucy Fed #2**

**FEMA Map**

**Attachment #6**  
**Site Map**



**Read & Stevens Inc.**

Lucy Federal #2

Section 14 T20S R34E 1980' FSL 330' FWL

GPS: 32.571347, -103.538483

Lea County, NM

**Republic Backhoe Service, LLC**

47 E. Dickens Rd.

Lovington, NM 88260

**Lucy Fed #2**

Spill Area/Sample Location Points

**Attachment #7**  
**Excavation Map**



**Attachment #8**  
**C-141**

Received by OCD: 10/3/2019 3:35:24 PM

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

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

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

|                |               |
|----------------|---------------|
| Incident ID    | NRM1927736783 |
| District RP    | IRP-5728      |
| Facility ID    |               |
| Application ID | pRM1927737297 |

## Release Notification

### Responsible Party

|  |                                |
|--|--------------------------------|
| Responsible Party Read & Stevens, Inc.                 | OGRID 18917                    |
| Contact Name Kelly Barajas                             | Contact Telephone 575-624-3760 |
| Contact email kbarajas@read-stevens.com                | Incident # (assigned by OCD)   |
| Contact mailing address PO Box 1518, Roswell, NM 88202 |                                |

### Location of Release Source

Latitude 32.57121 N Longitude -103.53794 W  
*(NAD 83 in decimal degrees to 5 decimal places)*

|   |                                   |
|---|-----------------------------------|
| Site Name Lucy Federal #2                   | Site Type Oil Lease               |
| Date Release Discovered 10/02/2019 12:00 AM | API# (if applicable) 30-025-40055 |

| Unit Letter | Section | Township | Range | County         |
|-------------|---------|----------|-------|----------------|
| L           | 14      | 20S      | 34E   | Lea County, NM |

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)  
*rlm/10/4/2019*

### Nature and Volume of Release

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

|  |  |  |
|--|--|--|
| <input type="checkbox"/> Crude Oil                 | Volume Released (bbls)   | Volume Recovered (bbls)                                  |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) 100 bbls  | Volume Recovered (bbls) 4 bbls                           |
|  | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)   | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)  | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)   | Volume/Weight Recovered (provide units)                  |

Cause of Release

Lightning striked by the water tanks and caused an explosion and fire.

Form C-141

State of New Mexico  
Oil Conservation Division

Page 2

|                |               |
|----------------|---------------|
| Incident ID    | NRM1927736783 |
| District RP    | 1RP-5728      |
| Facility ID    |               |
| Application ID | pRM1927737297 |

|   |   |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   | If YES, for what reason(s) does the responsible party consider this a major release?<br><b>Volumed released exceeds the minimum 25 bbls. Lightning strike resulted in the fire.</b> |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br><b>Notice was given to Robert Hamlet of the NMOCD Artesia by Nichole Calahan of Republic Backhoe Services, LLC via phone at 2:23 pm, and email at 2:30 pm on 10/2/2019.</b> |   |

### Initial Response

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

|  |  |
|--|--|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.   |  |
| If all the actions described above have <u>not</u> been undertaken, explain why:   |  |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.  |  |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |  |
| Printed Name: <u>Joe Tovar</u>   | Title: <u>Manager, Production and Operations</u> |
| Signature: <u><i>Kelly Barajas for Joe Tovar</i></u>   | Date: <u>10/3/2019</u>                           |
| email: <u>jtovar@read-stevens.com</u>  | Telephone: <u>575-390-2425</u>                   |
| <b><u>OCD Only</u></b>   |  |
| Received by: <u>Ramona Marcus</u>  | Date: <u>10/04/2019</u>                          |

Form C-141  
Page 3

State of New Mexico  
Oil Conservation Division

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

### Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

|   |   |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release?   | 185 (ft bgs)  |
| Did this release impact groundwater or surface water?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141  
Page 4

State of New Mexico  
Oil Conservation Division

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

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

Printed Name: Joe TOVAR Title: Manager, Production & Operations  
 Signature: [Handwritten Signature] Date: 12-31-19  
 email: jtovar@road-stevens.com Telephone: 575-390-2425

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Form C-141

Page 5

State of New Mexico  
Oil Conservation Division

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

### Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Joe Tojar Title: Manager, Production & Operations  
 Signature: [Signature] Date: 12-31-19  
 email: jtojar@rend-stevens.com Telephone: 575-390-2425

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Form C-141  
Page 6

State of New Mexico  
Oil Conservation Division

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

### Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Joe Tovar Title: Manager, Production & Operations  
 Signature: [Signature] Date: 12-31-19  
 email: jtovar@read-stevens.com Telephone: 575-390-2425

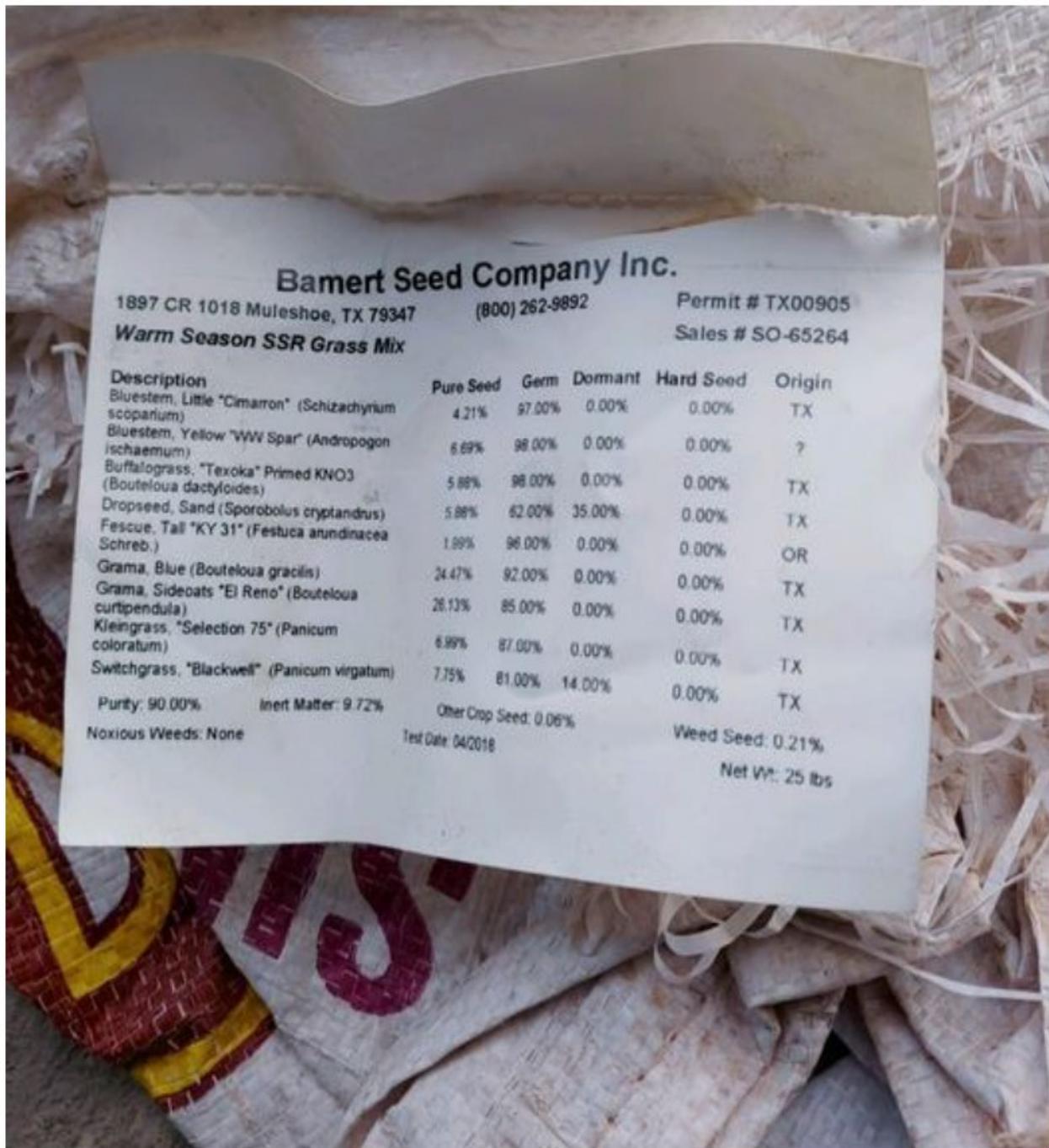
**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**Attachment #8  
Seed Mixture**



**Bamert Seed Company Inc.**

1897 CR 1018 Muleshoe, TX 79347

(800) 262-9892

Permit # TX00905

**Warm Season SSR Grass Mix**

Sales # SO-65264

| Description  | Pure Seed | Germ   | Dormant | Hard Seed | Origin |
|--|-----------|--------|---------|-----------|--------|
| Bluestem, Little "Cimarron" (Schizachyrium scoparium)      | 4.21%     | 97.00% | 0.00%   | 0.00%     | TX     |
| Bluestem, Yellow "VW Spar" (Andropogon ischaemum)          | 6.69%     | 98.00% | 0.00%   | 0.00%     | ?      |
| Buffalograss, "Texoka" Primed KNO3 (Bouteloua dactyloides) | 5.88%     | 98.00% | 0.00%   | 0.00%     | TX     |
| Dropseed, Sand (Sporobolus cryptandrus)                    | 5.88%     | 82.00% | 35.00%  | 0.00%     | TX     |
| Fescue, Tall "KY 31" (Festuca arundinacea Schreb.)         | 1.99%     | 96.00% | 0.00%   | 0.00%     | OR     |
| Grama, Blue (Bouteloua gracilis)                           | 24.47%    | 92.00% | 0.00%   | 0.00%     | TX     |
| Grama, Sideoats "El Reno" (Bouteloua curtipendula)         | 26.13%    | 85.00% | 0.00%   | 0.00%     | TX     |
| Kleingrass, "Selection 75" (Panicum coloratum)             | 6.89%     | 87.00% | 0.00%   | 0.00%     | TX     |
| Switchgrass, "Blackwell" (Panicum virgatum)                | 7.75%     | 81.00% | 14.00%  | 0.00%     | TX     |

Purity: 90.00%

Inert Matter: 9.72%

Other Crop Seed: 0.06%

Noxious Weeds: None

Test Date: 04/2018

Weed Seed: 0.21%

Net Wt: 25 lbs



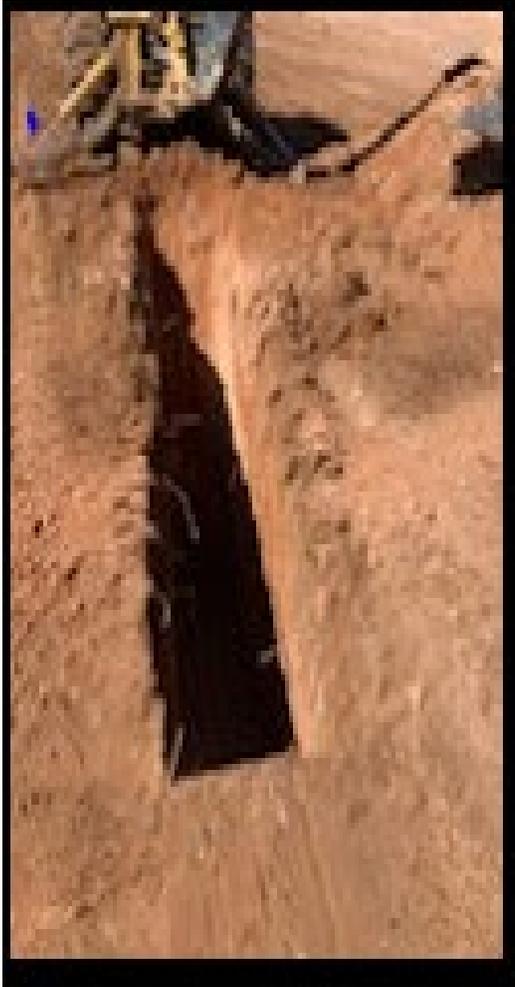
**Attachment #9**  
**Photos**



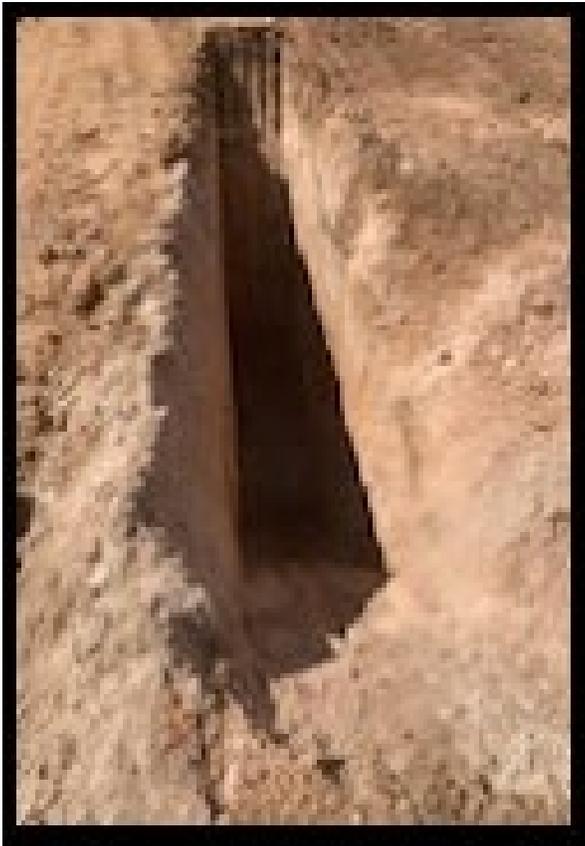




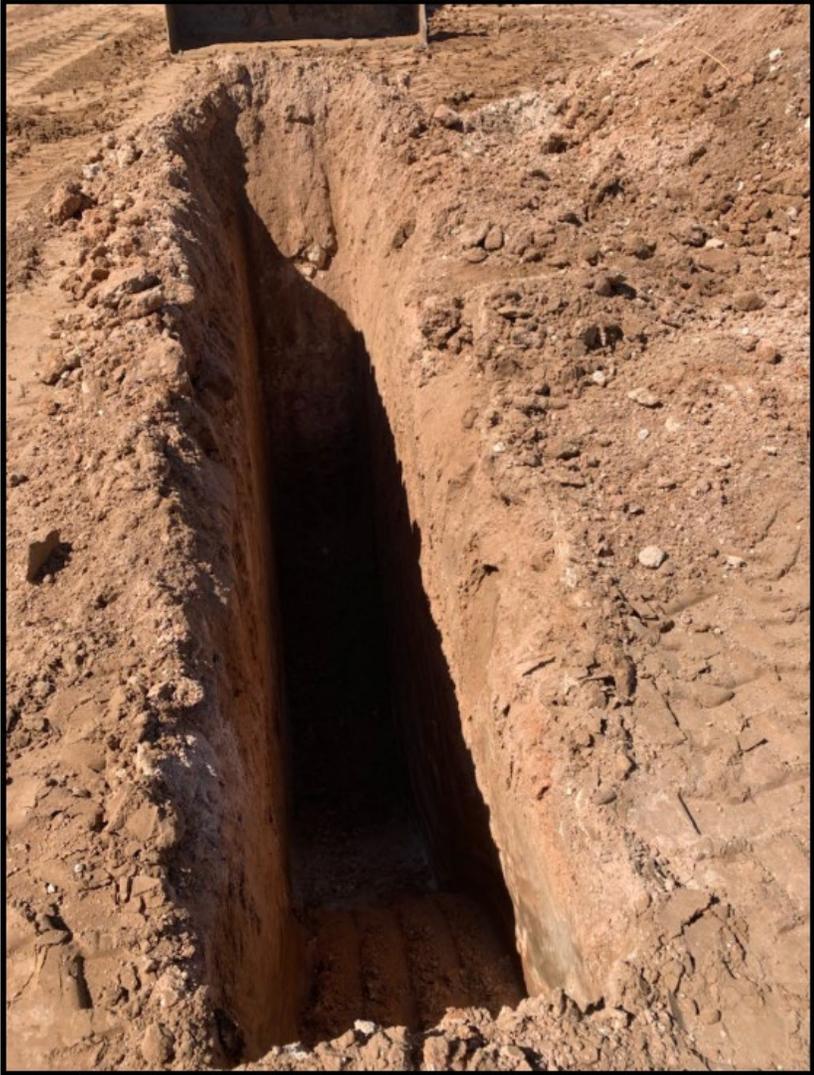
**Sample C**



Sample D



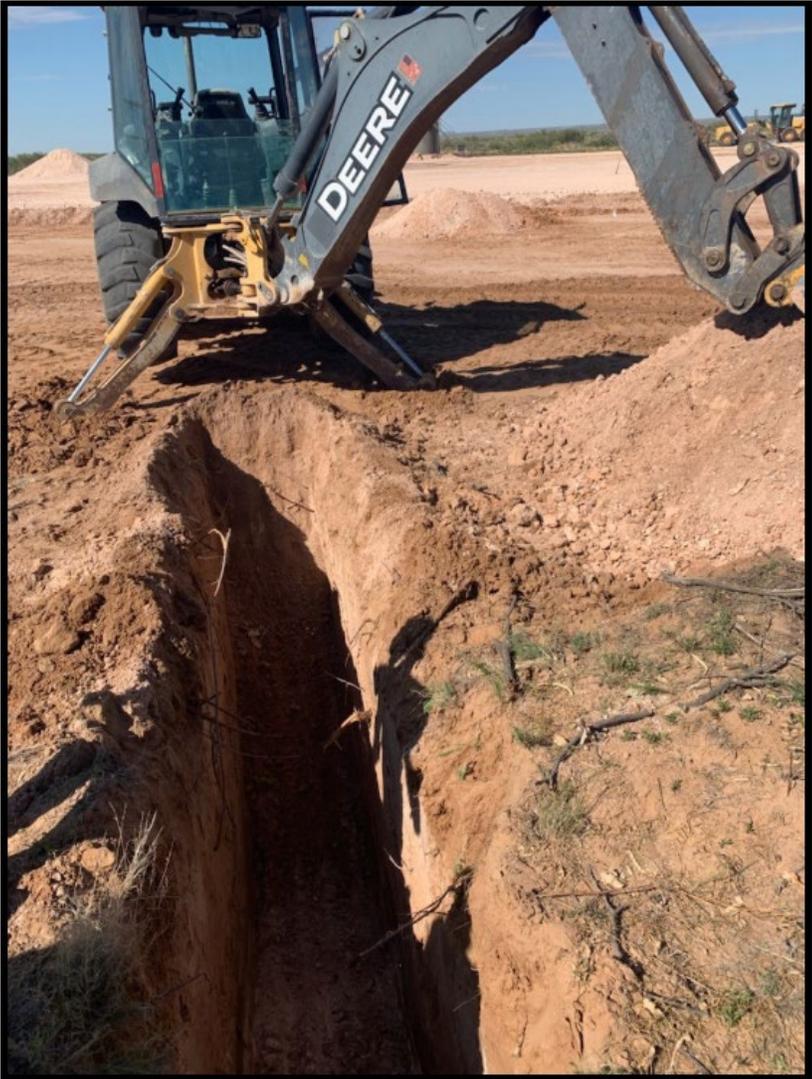
Sample E

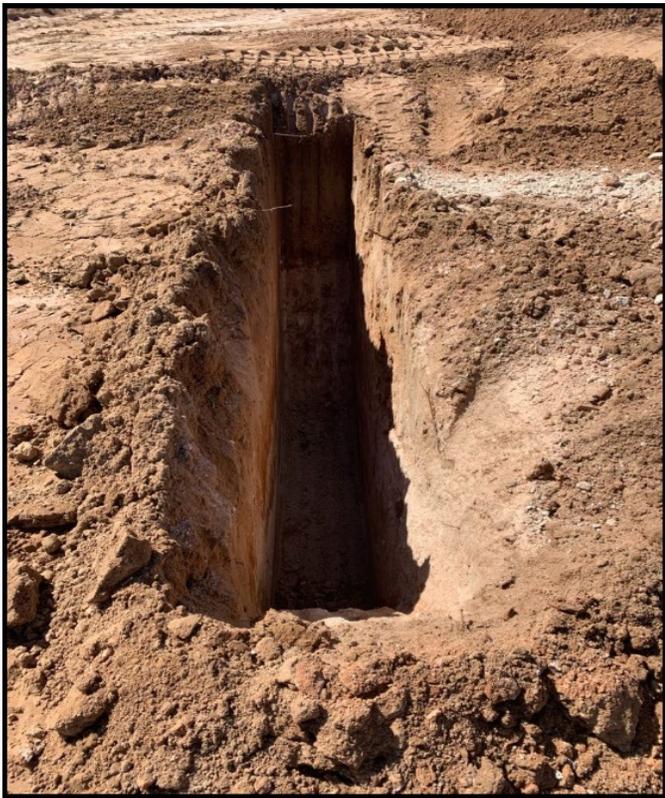
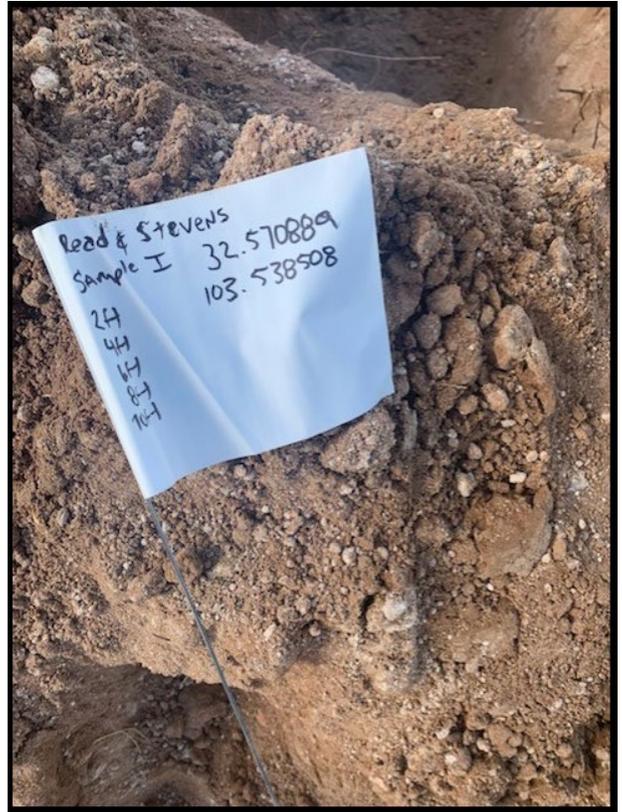


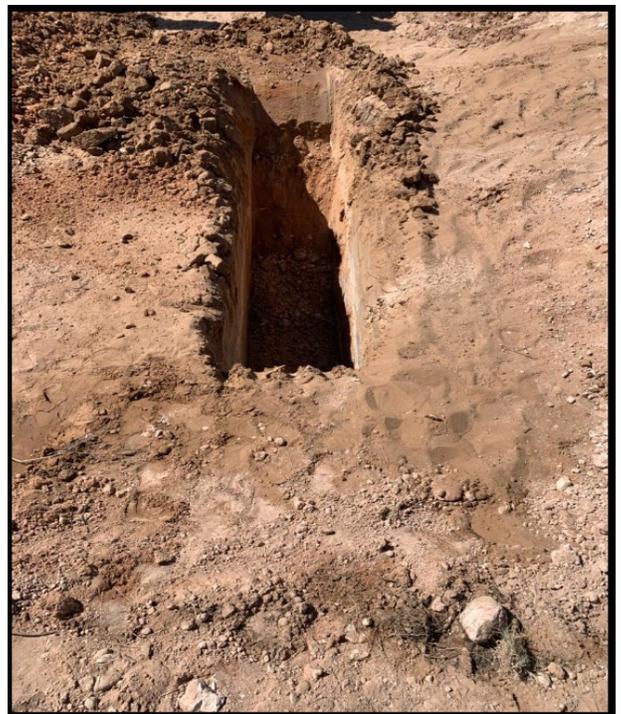
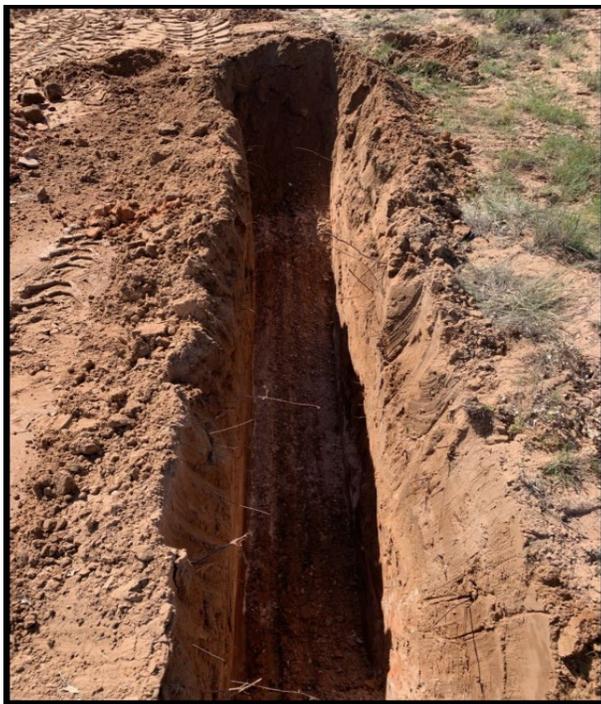
Sample F

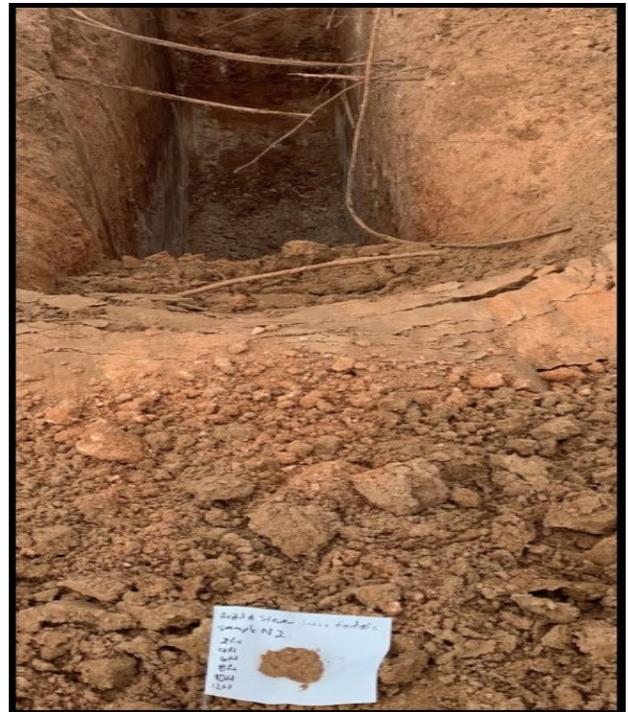


Sample G



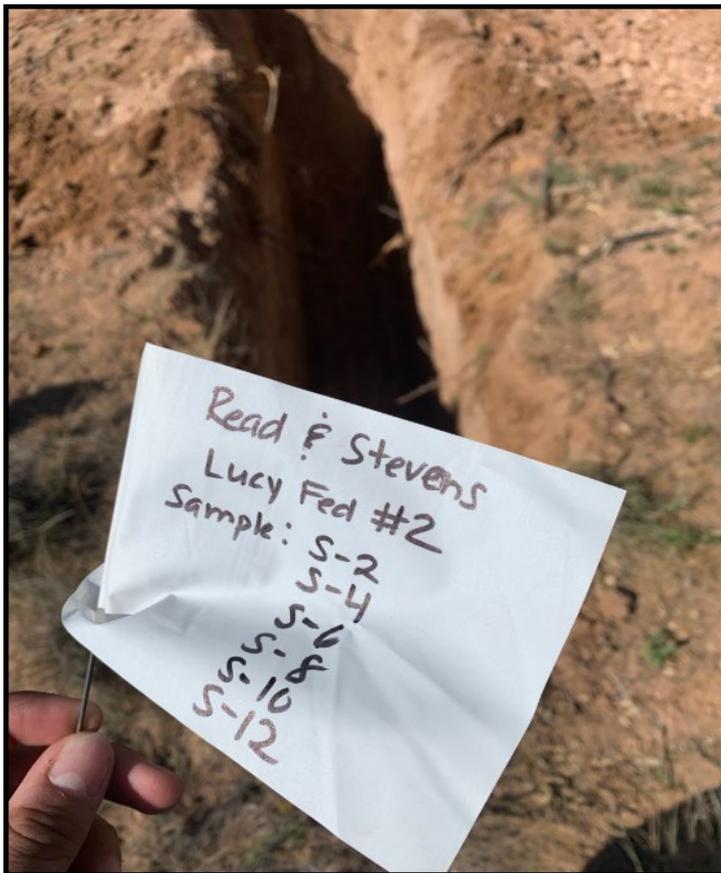












**Closure Samples:**















3A-2  
3A-5  
3A-10

Lucy Fed #12  
3A-2 Road # Stevens  
3A-5 1/2/2019  
3A-10





Lucy Field #2  
SA-2 Road & Stevens  
SA-5 1/20/2014  
SA-10

SA-2  
1/20/2014  
Lucy Field #2

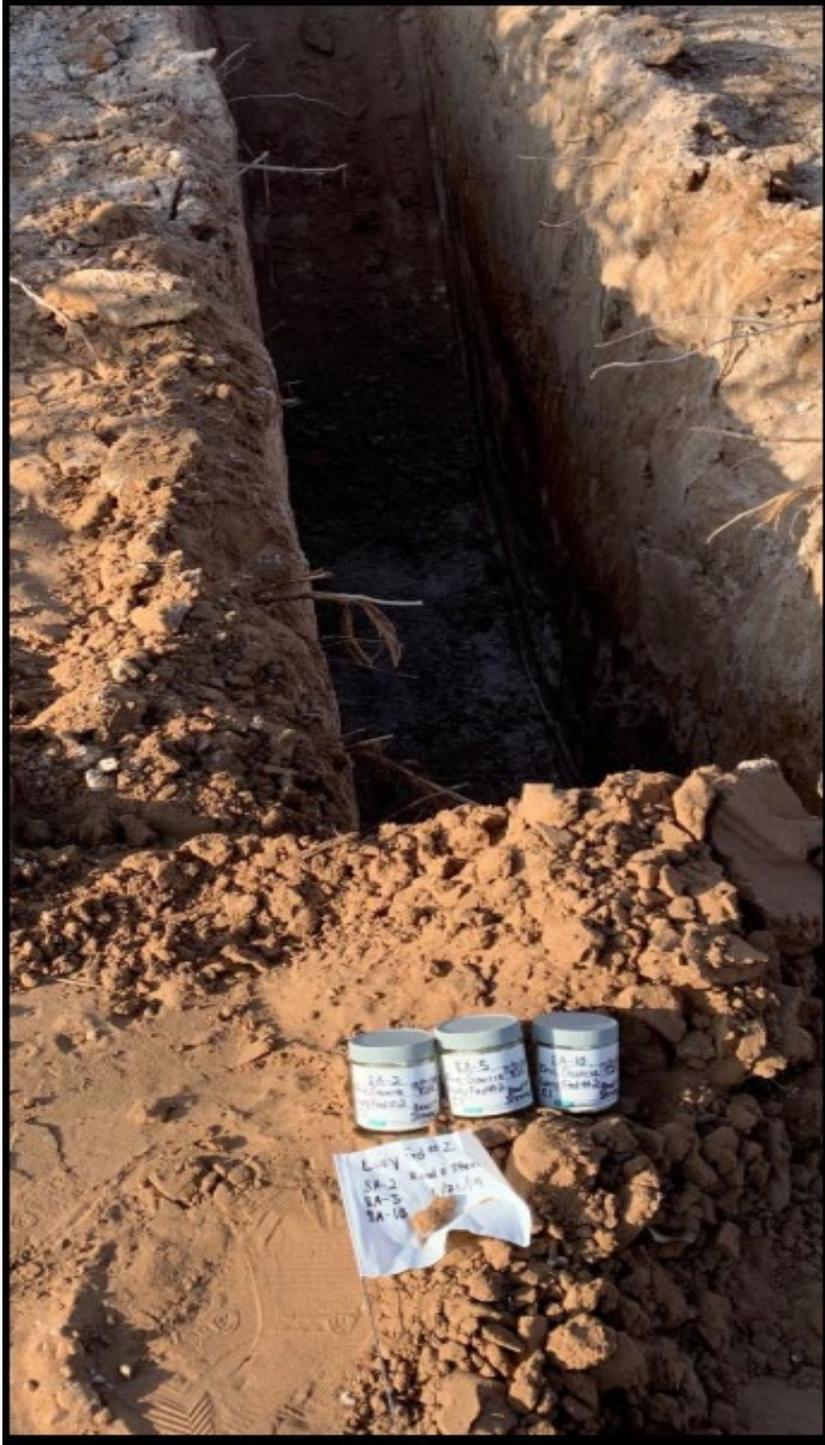
SA-5  
1/20/2014  
Lucy Field #2

SA-10  
1/20/2014  
Lucy Field #2



Sample 7A











11A-2  
The Garcia 11/21/19  
Lucy Fed #2  
Red & Stevens

11A-5  
The Garcia 11/21/19  
Lucy Fed #2  
Red & Stevens

11A-10  
The Garcia 11/21/19  
Lucy Fed #2  
Red & Stevens

Lucy Fed #2  
11A-2 Red & Stevens  
11A-5  
11A-10 11/21/19



12A-2  
12A-5  
12A-10

Lucey Fed #12  
12A-2 Road # Stevens  
12A-5 11/21/19  
12A-10













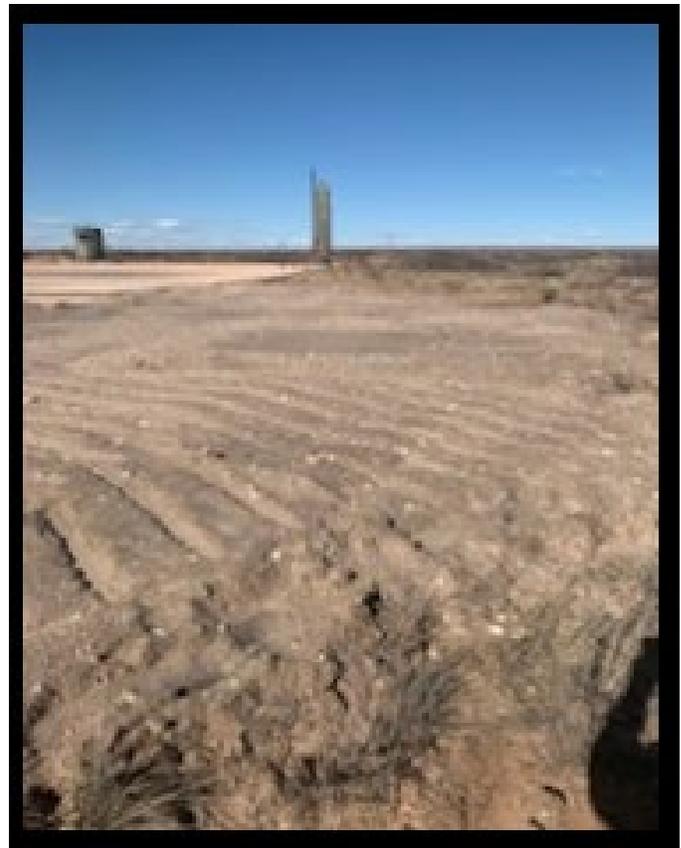
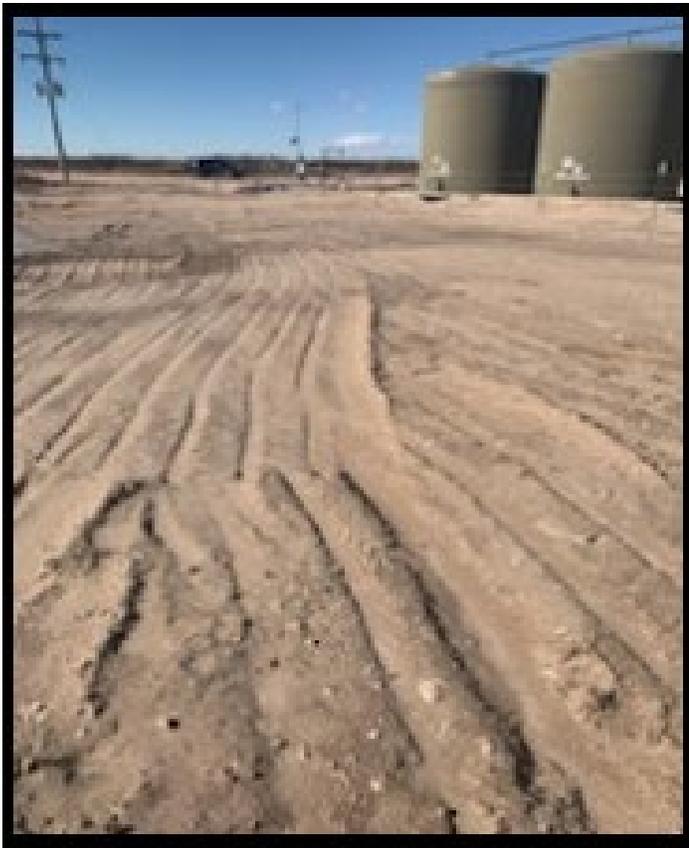






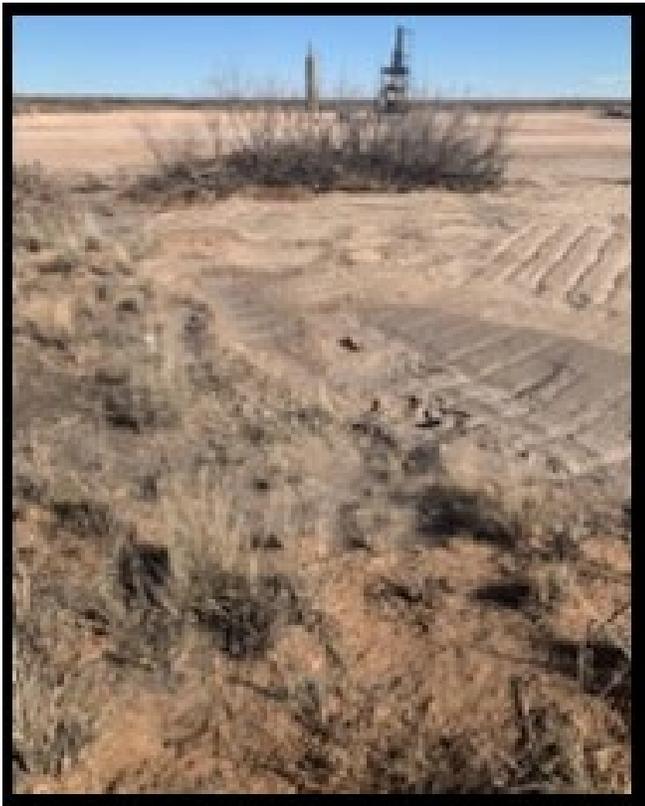
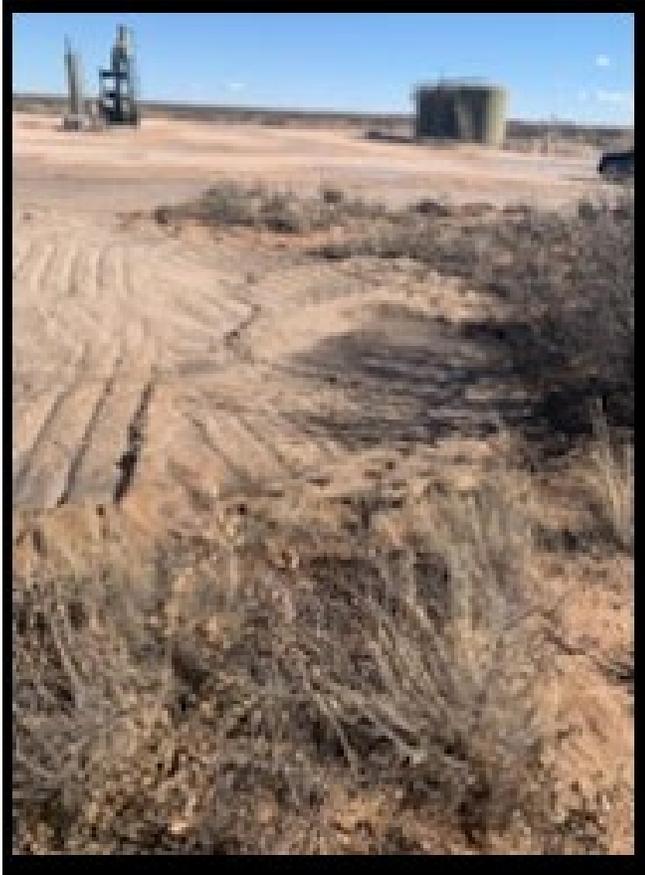














**Attachment #10**  
**Laboratory Analysis**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

October 17, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 10/14/19 8:15.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/11/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: H - 2 (H903474-01)**

| Chloride, SM4500CI-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/16/2019      | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: H - 4 (H903474-02)**

| Chloride, SM4500CI-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 10/16/2019      | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: H - 6 (H903474-03)**

| Chloride, SM4500CI-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/16/2019      | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: H - 8 (H903474-04)**

| Chloride, SM4500CI-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 272    | 16.0            | 10/16/2019      | ND           | 416 | 104        | 400           | 3.77 |           |  |

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/11/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: H - 10 (H903474-05)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 64.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: I - 2 (H903474-06)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1400   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: I - 4 (H903474-07)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 48.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: I - 6 (H903474-08)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 96.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: I - 8 (H903474-09)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/11/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: I - 10 (H903474-10)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: J - 2 (H903474-11)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 320    | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: J - 4 (H903474-12)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 176    | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: J - 6 (H903474-13)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 208    | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: J - 8 (H903474-14)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/11/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: J - 10 (H903474-15)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: K - 2 (H903474-16)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 96.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: K - 4 (H903474-17)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: K - 6 (H903474-18)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: K - 8 (H903474-19)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 304    | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/11/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: K - 10 (H903474-20)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 32.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: L - 2 (H903474-21)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 32.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: L - 4 (H903474-22)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 128    | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: L - 6 (H903474-23)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

**Sample ID: L - 8 (H903474-24)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | <16.0  | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/11/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: L - 10 (H903474-25)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | <16.0  | 16.0            | 10/16/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: *Reed & Stevens*

Company Name: Republic Backhoe Service  
 Project Manager: Eric Garcia  
 Address: 47 E. Dickens Rd.

City: Lovington State: NM Zip: 88260

Phone #: 575-631-0131 Fax #:

Project #: Project Owner: *Reed & Stevens*

Project Name: *Lucy Federal #2* State: NM zip: 88202

Project Location: *Lea County* Phone #: 575-390-2425

Sampler Name: *Eric Garcia* Fax #:

FOR LAB USE ONLY

| Lab I.D.       | Sample I.D. | (G)RAB OR (C)OMP.                   | # CONTAINERS | MATRIX      |            |                                     |     |        |         | DATE            | TIME         | ANALYSIS REQUEST |
|----------------|-------------|-------------------------------------|--------------|-------------|------------|-------------------------------------|-----|--------|---------|-----------------|--------------|------------------|
|                |             |                                     |              | GROUNDWATER | WASTEWATER | SOIL                                | OIL | SLUDGE | OTHER : |                 |              |                  |
| <i>H032474</i> | <i>H-2</i>  | <input checked="" type="checkbox"/> |              |             |            | <input checked="" type="checkbox"/> |     |        |         | <i>10/11/19</i> | <i>8:00</i>  | <i>Chloride</i>  |
|                | <i>H-9</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>8:10</i>  |                  |
|                | <i>H-6</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>8:20</i>  |                  |
|                | <i>H-8</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>8:30</i>  |                  |
|                | <i>H-10</i> |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>8:45</i>  |                  |
|                | <i>T-2</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>10:30</i> |                  |
|                | <i>T-1</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>10:40</i> |                  |
|                | <i>T-0</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>10:50</i> |                  |
|                | <i>T-8</i>  |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>11:00</i> |                  |
|                | <i>T-10</i> |                                     |              |             |            |                                     |     |        |         | <i>10/11/19</i> | <i>11:10</i> |                  |

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Relinquished By: *[Signature]* Date: *10-14-19* Time: *0815*  
 Received By: *[Signature]* Date: *10-14-19* Time: *0815*

Delivered By: (Circle One) *16.7°C* #*97* Sample Condition:  Cool  Intact  Yes  No  
 Sampler - UPS - Bus - Other: *Conserved 17.1°C*  Yes  No

REMARKS: *email results to: ericgarcia@2@hotmail.com*

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

|  |  |                         |  |
|--|--|-------------------------|--|
| Company Name: Republic Backhoe Service |  | P.O. #:                 |  |
| Project Manager: Eric Garcia           |  | Company: Reed & Stevens |  |
| Address: 47 E. Dickens Rd.             |  | Attn: Joe Tovar         |  |
| City: Lovington                        |  | Address: PO Box 1518    |  |
| Phone #: 575-631-0131                  |  | State: NM zip: 88202    |  |
| Project #: 575-631-0131                |  | City: Roswell           |  |
| Project Name: Lucy Federal #2          |  | State: NM zip: 88202    |  |
| Project Location: Lea County           |  | Phone #: 575-390-2425   |  |
| Sampler Name: Eric Garcia              |  | Fax #:                  |  |

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |         | DATE     | TIME  | ANALYSIS REQUEST |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|----------|-------|------------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : |          |       |                  |
| H963474  | J-2         | G                 |              |             |            | X    |     |        |         | 10/11/19 | 12:30 | X Chloride       |
|          | J-4         |                   |              |             |            |      |     |        |         | 10/11/19 | 12:40 |                  |
|          | J-6         |                   |              |             |            |      |     |        |         | 10/11/19 | 12:50 |                  |
|          | J-8         |                   |              |             |            |      |     |        |         | 10/11/19 | 1:00  |                  |
|          | J-10        |                   |              |             |            |      |     |        |         | 10/11/19 | 1:10  |                  |
|          | K-2         |                   |              |             |            |      |     |        |         | 10/11/19 | 2:00  |                  |
|          | K-4         |                   |              |             |            |      |     |        |         | 10/11/19 | 2:10  |                  |
|          | K-6         |                   |              |             |            |      |     |        |         | 10/11/19 | 2:20  |                  |
|          | K-8         |                   |              |             |            |      |     |        |         | 10/11/19 | 2:30  |                  |
|          | K-10        |                   |              |             |            |      |     |        |         | 10/11/19 | 2:40  |                  |

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Relinquished By: *[Signature]* Date: 10-14-19 Time: 8:15  
 Received By: *[Signature]* Date: 10-14-19 Time: 8:15

Delivered By: (Circle One) 16.72 #97 Sample Condition Cool Intact  
 Sampler - UPS - Bus - Other: *Completed 12.12* Yes  No  Yes  No  No  No

Checked By: *[Signature]* (Initials) 40.

REMARKS: email results to: ericgarcia@20@hotmail.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

BI-10

ANALYSIS REQUEST

|  |   |   |                               |          |      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|-------------------------------|----------|------|---------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Company Name: Republic Backhoe Service<br>Project Manager: Eric Garcia<br>Address: 47 E. Dickens Rd<br>City: Lovington State: NM Zip: 88260<br>Phone #: 575-631-0131 Fax #:<br>Project #:<br>Project Name: Lucy Federal #2<br>Project Location: Lea County<br>Sample Name: Eric Garcia<br>FOR LAB USE ONLY |   | P.O. #:<br>Company: Read Stevens<br>Attn: Joe Tovar<br>Address: PO Box 1518<br>City: Roswell<br>State: NM zip: 88202<br>Phone #: 575-390-2425<br>Fax #: |                               |          |      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lab I.D.<br>4903474<br>21<br>22<br>23<br>24<br>25  | Sample I.D.<br>L-2<br>L-4<br>L-6<br>L-8<br>L-10 | (G)RAB OR (C)OMP.<br># CONTAINERS<br>GROUNDWATER<br>WASTEWATER<br>SOIL<br>OIL<br>SLUDGE<br>OTHER :<br>ACID/BASE:<br>ICE / COOL<br>OTHER :               | MATRIX<br>PRESERV<br>SAMPLING | DATE     | TIME | Chloride<br>X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |   |   |                               | 10/11/19 | 3:45 |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |   |   |                               | 10/11/19 | 3:55 |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |   |   |                               | 10/11/19 | 4:10 |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |   |   |                               | 10/11/19 | 4:20 |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |   |   |                               | 10/11/19 | 4:30 |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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Relinquished By: *[Signature]* Date: 10/14/19 Time: 8:15  
 Received By: *[Signature]* Date:   
 Time:   
 Delivered By: (Circle One) 16.72 #97 Sample Condition Cool Intact  
 Sampler - UPS - Bus - Other: *Positively 7.1e*  Yes  No  Yes  No  
 CHECKED BY: *[Signature]* (Initials) *TD*

Phone Result:  Yes  No Add'l Phone #:   
 Fax Result:  Yes  No Add'l Fax #:   
 REMARKS:   
 email results to:   
 ericgarcia62@hotmail.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

October 18, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 10/14/19 8:15.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: N 1 - 2 (H903475-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 1960   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |  |

**Sample ID: N 1 - 4 (H903475-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |  |

**Sample ID: N 1 - 6 (H903475-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |  |

**Sample ID: N 1 - 8 (H903475-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |  |

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: N 1 - 10 (H903475-05)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: N 1 - 12 (H903475-06)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: M - 2 (H903475-07)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 368    | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: M - 4 (H903475-08)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: M - 6 (H903475-09)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

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 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: M - 8 (H903475-10)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: M - 10 (H903475-11)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: M - 12 (H903475-12)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: O - 2 (H903475-13)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | <16.0  | 16.0            | 10/17/2019 | ND           | 432 | 108        | 400           | 3.77 |           |

**Sample ID: O - 4 (H903475-14)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |

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 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: O - 6 (H903475-15)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: O - 8 (H903475-16)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: O - 10 (H903475-17)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: O - 12 (H903475-18)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: P - 2 (H903475-19)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

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|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: P - 4 (H903475-20)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: P - 6 (H903475-21)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: P - 8 (H903475-22)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: P - 10 (H903475-23)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: P - 12 (H903475-24)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

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 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: Q - 2 (H903475-25)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: Q - 4 (H903475-26)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: Q - 6 (H903475-27)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: Q - 8 (H903475-28)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: Q - 10 (H903475-29)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

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 LOVINGTON NM, 88260  
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|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: Q - 12 (H903475-30)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: R - 2 (H903475-31)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: R - 4 (H903475-32)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: R - 6 (H903475-33)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 416 | 104        | 400           | 3.77 |           |  |

**Sample ID: R - 8 (H903475-34)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: R - 10 (H903475-35)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: R - 12 (H903475-36)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: S - 1 (H903475-37)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: S - 4 (H903475-38)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: S - 6 (H903475-39)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: S - 8 (H903475-40)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |

**Sample ID: S - 10 (H903475-41)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 48.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |

**Sample ID: S - 12 (H903475-42)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |

**Sample ID: N 2 - 2 (H903475-43)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1600   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |

**Sample ID: N 2 - 4 (H903475-44)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/14/2019                 | Sampling Date:      | 10/12/2019     |
| Reported:         | 10/18/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: N 2 - 6 (H903475-45)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: N 2 - 8 (H903475-46)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: N 2 - 10 (H903475-47)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

**Sample ID: N 2 - 12 (H903475-48)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/17/2019 | ND           | 400 | 100        | 400           | 0.00 |           |  |

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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A handwritten signature in black ink that reads "Caley D. Keene".

---

Caley D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

|   |   |   |  |   |
|---|---|---|--|---|
| Company Name: Republic Backhoe Service<br>Project Manager: Eric Garcia<br>Address: 47 E. Dickens Rd.<br>City: Lovington State: NM zip: 88260<br>Phone #: 575-631-0131 Fax #: _____<br>Project #: _____ Project Owner: Read Stevens<br>Project Name: Lucy Federal # 2<br>Project Location: Lea County<br>Sampler Name: Eric Garcia<br>For LAB USE ONLY |   | P.O. #: _____<br>Company: Read Stevens<br>Attn: Joe Tovar<br>Address: PO Box 1518<br>City: Roswell<br>State: NM zip: 88202<br>Phone #: 575-390-2425<br>Fax #: _____ |  |   |
| Lab I.D. Sample I.D.<br>H903475<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10  | N1-2<br>N1-4<br>N1-6<br>N1-8<br>N1-10<br>N1-12<br>M-2<br>M-4<br>M-6<br>M-8  | (G)RAB OR (C)OMP.<br># CONTAINERS<br>GROUNDWATER<br>WASTEWATER<br>SOIL<br>OIL<br>SLUDGE<br>OTHER :<br>ACID/BASE:<br>ICE / COOL<br>OTHER :                           | MATRIX<br>PRESERVY<br>SAMPLING<br>DATE<br>TIME<br>10/12/19 6:30A<br>10/12/19 6:40A<br>10/12/19 6:50A<br>10/12/19 7:00A<br>10/12/19 7:10A<br>10/12/19 7:20A<br>10/12/19 8:00A<br>10/12/19 8:10A<br>10/12/19 8:20A<br>10/12/19 8:30A | ANALYSIS REQUEST<br>Chloride<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____ |
|   | PLEASE NOTE: Lability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. |   |  |   |
|   | Relinquished By: _____<br>Date: 10/14/19<br>Time: 8:15  |   | Received By: _____<br>Date: _____<br>Time: _____   |   |
|   | Delivered By: (Circle One) UPS 16.72<br>Bus - Other: Restricted 17.12<br>Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>  |   | CHECKED BY: (Initials) _____<br>7:20   |   |
|   | REMARKS: _____<br>Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: _____<br>Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #: _____<br>email results to: eric.garcia@cardinallaboratories.com  |   |  |   |

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

Company Name: Republic Backhoe Service  
 Project Manager: Eric Garcia  
 Address: 47 E. Dickens Rd.  
 City: Lovington State: NM Zip: 88260  
 Phone #: 575-631-0131 Fax #:   
 Project #:   
 Project Owner: Read Stevens  
 Project Name: Lucy Federal #2  
 Project Location: Lea County  
 Sampler Name: Eric Garcia  
 P.O. #:   
 Company: Read Stevens  
 Attn: Joe Tovar  
 Address: PO Box 1518  
 City: Roswell  
 State: NM zip: 88202  
 Phone #: 575-390-2425  
 Fax #:   
 ANALYSIS REQUEST

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP.                   | # CONTAINERS | MATRIX      |            |                                     |     |        |         | DATE     | TIME   | ANALYSIS REQUEST |
|----------|-------------|-------------------------------------|--------------|-------------|------------|-------------------------------------|-----|--------|---------|----------|--------|------------------|
|          |             |                                     |              | GROUNDWATER | WASTEWATER | SOIL                                | OIL | SLUDGE | OTHER : |          |        |                  |
| H903475  | M-10        | <input checked="" type="checkbox"/> |              |             |            | <input checked="" type="checkbox"/> |     |        |         | 10/12/19 | 8:10A  | Chloride         |
|          | M-12        | <input checked="" type="checkbox"/> |              |             |            |                                     |     |        |         | 10/12/19 | 8:50   |                  |
|          | O-2         |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 10:00  |                  |
|          | O-4         |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 10:10  |                  |
|          | O-6         |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 10:20  |                  |
|          | O-8         |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 10:30  |                  |
|          | O-10        |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 10:40  |                  |
|          | O-12        |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 10:50  |                  |
|          | P-2         |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 12:00P |                  |
|          | P-4         |                                     |              |             |            |                                     |     |        |         | 10/12/19 | 12:10  |                  |

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Relinquished By: *[Signature]* Date: 10-14-19 Time: 8:15  
 Received By: *[Signature]* Date: 10-14-19 Time: 8:15  
 Relinquished By: *[Signature]* Date: 10-14-19 Time: 8:15  
 Received By: *[Signature]* Date: 10-14-19 Time: 8:15

Delivered By: (Circle One) 16:28 #97 Sample Condition Cool Intact  
 Sampler - UPS - Bus - Other: *Consolidated 17.10*  Yes  No  Yes  No  
 CHECKED BY: (Initials) *TS*

REMARKS: email results to: ericgarcia@a2a@hotmail.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

| Company Name: Republic Backhoe Service<br>Project Manager: Eric Garcia<br>Address: 47 E. Dickens Rd.<br>City: Lovington<br>State: NM Zip: 88260<br>Phone #: 575-631-0131 Fax #: |             | P.O. #:<br>Company: Read & Stevens<br>Attn: Joe Tovar<br>Address: PO Box 1518<br>City: Roswell<br>State: NM Zip: 88202<br>Phone #: 575-390-2425 Fax #: |              |        |         |          |         |      |                  |
|---|-------------|--|--------------|--------|---------|----------|---------|------|------------------|
| Project Name: Lucy Federal #2<br>Project Location: Leq County<br>Sampler Name: Eric Garcia  |             | Project Owner: Read & Stevens<br>State: NM Zip: 88202<br>Phone #: 575-390-2425 Fax #:  |              |        |         |          |         |      |                  |
| FOR LAB USE ONLY  |             |  |              |        |         |          |         |      |                  |
| Lab I.D.  | Sample I.D. | (G)RAB OR (C)OMP.  | # CONTAINERS | MATRIX | PRESERV | SAMPLING | DATE    | TIME | ANALYSIS REQUEST |
| 21  | P-6         |  |              |        |         |          | 10/2/19 | 2:20 | X Chloride       |
| 22  | P-8         |  |              |        |         |          | 10/2/19 | 2:30 |                  |
| 23  | P-10        |  |              |        |         |          | 10/2/19 | 2:40 |                  |
| 24  | P-12        |  |              |        |         |          | 10/2/19 | 2:50 |                  |
| 25  | Q-2         |  |              |        |         |          | 10/2/19 | 2:00 |                  |
| 26  | Q-4         |  |              |        |         |          | 10/2/19 | 2:10 |                  |
| 27  | Q-6         |  |              |        |         |          | 10/2/19 | 2:20 |                  |
| 28  | Q-8         |  |              |        |         |          | 10/2/19 | 2:30 |                  |
| 29  | Q-10        |  |              |        |         |          | 10/2/19 | 2:40 |                  |
| 30  | Q-12        |  |              |        |         |          | 10/2/19 | 2:50 |                  |

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Relinquished By: [Signature] Date: 10/14/19 Received By: [Signature] Date: 08/15/19

Delivered By: (Circle One) 16.70 #97 Sample Condition Cool Intact Checked By: [Signature] (Initials) VQ

Sampler - UPS - Bus - Other: Associated 17.10

REMARKS: email results to: eric.garcia@cardinal.com

Phone Result: Yes No Add'l Phone #: Fax Result: Yes No Add'l Fax #:

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

Company Name: Republic Backhoe Service  
 Project Manager: Eric Garcia  
 Address: 47 E. Dickens Rd.  
 City: Lovington State: NM Zip: 88260  
 Phone #: 575-631-0131 Fax #:   
 Project #:   
 Project Owner: Reed Stevens  
 Project Name: Lucy Federal #2  
 Project Location: Lea County  
 Sampler Name: Eric Garcia  
 P.O. #:   
 Company: Reed Stevens  
 Attn: Joe Tovar  
 Address: PO Box 1518  
 City: Roswell  
 State: NM Zip: 88202  
 Phone #: 575-390-2425  
 Fax #:

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |         | DATE    | TIME | ANALYSIS   |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|---------|------|------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : |         |      |            |
| H903475  |             |                   |              |             |            |      |     |        |         |         |      |            |
| 31       | R-2         | G                 |              |             | X          |      |     |        |         | 10/2/19 | 3:30 | X Chloride |
| 32       | R-4         |                   |              |             |            |      |     |        |         | 10/2/19 | 3:40 |            |
| 33       | R-6         |                   |              |             |            |      |     |        |         | 10/2/19 | 3:50 |            |
| 34       | R-8         |                   |              |             |            |      |     |        |         | 10/2/19 | 4:00 |            |
| 35       | R-10        |                   |              |             |            |      |     |        |         | 10/2/19 | 4:10 |            |
| 36       | R-12        |                   |              |             |            |      |     |        |         | 10/2/19 | 4:20 |            |
| 37       | S-7         |                   |              |             |            |      |     |        |         | 10/2/19 | 4:40 |            |
| 38       | S-4         |                   |              |             |            |      |     |        |         | 10/2/19 | 4:50 |            |
| 39       | S-6         |                   |              |             |            |      |     |        |         | 10/2/19 | 5:00 |            |
| 40       | S-8         |                   |              |             |            |      |     |        |         | 10/2/19 | 5:10 |            |

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Relinquished By: *[Signature]* Date: 10-14-19  
 Received By: *[Signature]* Date: 10-14-19  
 Time: 8:15  
 Relinquished By: *[Signature]* Date:   
 Received By: *[Signature]* Date:   
 Time:   
 Delivered By: (Circle One) 16:72 #97  
 Sampler - UPS - Bus - Other: *Printed 17:12*

Sample Condition:  Intact  Cool  Yes  No  
 CHECKED BY: *[Signature]*  
 REMARKS: email results to: ericgarcia@cardinal.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hotchkiss, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

Company Name: Republic Backhoe Service  
 Project Manager: Eric Garcia  
 Address: 47 E. Dickens Rd  
 City: Lovington State: NM Zip: 88260  
 Phone #: 575-631-0131 Fax #:   
 Project #:   
 Project Owner: Read Stevens  
 Project Name: Lucy Federal #2  
 Project Location: Lea County  
 Sampler Name: Eric Garcia  
 P.O. #:   
 Company: Read Stevens  
 Attn: Joe Tovar  
 Address: PO Box 1518  
 City: Roswell  
 State: NM zip: 88202  
 Phone #: 575-390-2425  
 Fax #:

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |         |           | DATE | TIME    | ANALYSIS |            |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|-----------|------|---------|----------|------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | ACID/BASE |      |         |          | ICE / COOL |
| 41       | S-10        | (G)               | 1            |             |            | X    |     |        |         |           |      | 10/2/19 | 5:20p    | Chloride   |
| 42       | S-12        |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 5:30     |            |
| 43       | N2-2        |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 5:45     |            |
| 44       | N2-4        |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 5:50     |            |
| 45       | N2-0        |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 6:00     |            |
| 46       | N2-8        |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 6:10     |            |
| 47       | N2-10       |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 6:20     |            |
| 48       | N2-12       |                   | 1            |             |            |      |     |        |         |           |      | 10/2/19 | 6:30     |            |

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Relinquished By: *[Signature]* Date: 10-14-19 Time: 8:15  
 Received By: *[Signature]* Date: 10-14-19 Time: 8:15  
 Delivered By: (Circle One) 16.7% #577 Sample Condition: Cool  Intact  Yes  No  Checked By: *[Signature]*  
 Sampler - UPS - Bus - Other: *[Signature]* No  Yes  No

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

REMARKS: email results to: ericgarcia@cardinal.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

October 17, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 10/17/19 9:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: BB - 2 (H903529-01)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.63 | 81.3       | 2.00          | 4.43 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.67 | 83.3       | 2.00          | 3.54 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.7       | 2.00          | 3.07 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.89 | 81.5       | 6.00          | 2.55 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 2880   | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 2.23  |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 0.219 |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |       |           |  |

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: BB - 4 (H903529-02)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.63 | 81.3       | 2.00          | 4.43 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.67 | 83.3       | 2.00          | 3.54 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.7       | 2.00          | 3.07 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.89 | 81.5       | 6.00          | 2.55 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

| Chloride, SM4500Cl-B |            | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>320</b> | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 2.23  |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 0.219 |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |       |           |  |

Surrogate: 1-Chlorooctane 99.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: BB - 5 (H903529-03)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.63 | 81.3       | 2.00          | 4.43 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.67 | 83.3       | 2.00          | 3.54 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.7       | 2.00          | 3.07 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.89 | 81.5       | 6.00          | 2.55 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

| Chloride, SM4500Cl-B |             | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>80.0</b> | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 2.23  |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 0.219 |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |       |           |  |

Surrogate: 1-Chlorooctane 99.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: BB - 10 (H903529-04)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.63 | 81.3       | 2.00          | 4.43 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.67 | 83.3       | 2.00          | 3.54 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.7       | 2.00          | 3.07 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.89 | 81.5       | 6.00          | 2.55 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

| Chloride, SM4500Cl-B |            | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>112</b> | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 2.23  |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 0.219 |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |       |           |  |

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: DD - 2 (H903529-05)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.63 | 81.3       | 2.00          | 4.43 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.67 | 83.3       | 2.00          | 3.54 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.7       | 2.00          | 3.07 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.89 | 81.5       | 6.00          | 2.55 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 73.3-129

| Chloride, SM4500Cl-B |             | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>1120</b> | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 2.23  |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 0.219 |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |       |           |  |

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: DD - 4 (H903529-06)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.63 | 81.3       | 2.00          | 4.43 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.67 | 83.3       | 2.00          | 3.54 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.7       | 2.00          | 3.07 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.89 | 81.5       | 6.00          | 2.55 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

| Chloride, SM4500Cl-B |            | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>560</b> | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 2.23  |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 214 | 107        | 200           | 0.219 |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |       |           |  |

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 93.4 % 37.6-147

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: DD - 5 (H903529-07)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |       |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD   | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.59 | 79.3       | 2.00          | 0.819 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.58 | 78.8       | 2.00          | 1.02  |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.3       | 2.00          | 0.941 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.82 | 80.4       | 6.00          | 0.635 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |       |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

| Chloride, SM4500Cl-B |            | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>544</b> | 16.0            | 10/17/2019 | ND              | 432 | 108        | 400           | 0.00 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |        |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD    | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 213 | 107        | 200           | 0.0685 |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 217 | 109        | 200           | 4.96   |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |        |           |  |

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.6 % 37.6-147

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: DD - 10 (H903529-08)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |       |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD   | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.59 | 79.3       | 2.00          | 0.819 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.58 | 78.8       | 2.00          | 1.02  |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.3       | 2.00          | 0.941 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.82 | 80.4       | 6.00          | 0.635 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |       |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

| Chloride, SM4500Cl-B |            | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>208</b> | 16.0            | 10/17/2019 | ND              | 400 | 100        | 400           | 3.92 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |        |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD    | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 213 | 107        | 200           | 0.0685 |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 217 | 109        | 200           | 4.96   |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |        |           |  |

Surrogate: 1-Chlorooctane 87.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: CC - 2 (H903529-09)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |       |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD   | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.59 | 79.3       | 2.00          | 0.819 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.58 | 78.8       | 2.00          | 1.02  |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.3       | 2.00          | 0.941 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.82 | 80.4       | 6.00          | 0.635 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |       |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

| Chloride, SM4500Cl-B |            | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>208</b> | 16.0            | 10/17/2019 | ND              | 400 | 100        | 400           | 3.92 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |        |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD    | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 213 | 107        | 200           | 0.0685 |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 217 | 109        | 200           | 4.96   |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |        |           |  |

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: CC - 4 (H903529-10)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |       |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD   | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.59 | 79.3       | 2.00          | 0.819 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.58 | 78.8       | 2.00          | 1.02  |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.3       | 2.00          | 0.941 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.82 | 80.4       | 6.00          | 0.635 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |       |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

| Chloride, SM4500Cl-B |             | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>16.0</b> | 16.0            | 10/17/2019 | ND              | 400 | 100        | 400           | 3.92 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |        |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD    | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 213 | 107        | 200           | 0.0685 |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 217 | 109        | 200           | 4.96   |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |        |           |  |

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 97.3 % 37.6-147

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: CC - 5 (H903529-11)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |       |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD   | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.59 | 79.3       | 2.00          | 0.819 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.58 | 78.8       | 2.00          | 1.02  |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.3       | 2.00          | 0.941 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.82 | 80.4       | 6.00          | 0.635 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |       |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.3-129

| Chloride, SM4500Cl-B |             | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>16.0</b> | 16.0            | 10/17/2019 | ND              | 400 | 100        | 400           | 3.92 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |        |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD    | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 213 | 107        | 200           | 0.0685 |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 217 | 109        | 200           | 4.96   |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |        |           |  |

Surrogate: 1-Chlorooctane 87.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/17/2019                 | Sampling Date:      | 10/16/2019     |
| Reported:         | 10/17/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | Cool & Intact  |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: CC - 10 (H903529-12)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: BF |      |            |               |       |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|-------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD   | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.59 | 79.3       | 2.00          | 0.819 |           |  |
| Toluene*       | <0.050 | 0.050           | 10/17/2019 | ND              | 1.58 | 78.8       | 2.00          | 1.02  |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 10/17/2019 | ND              | 1.61 | 80.3       | 2.00          | 0.941 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 10/17/2019 | ND              | 4.82 | 80.4       | 6.00          | 0.635 |           |  |
| Total BTEX     | <0.300 | 0.300           | 10/17/2019 | ND              |      |            |               |       |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

| Chloride, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AC |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/17/2019 | ND              | 400 | 100        | 400           | 3.92 |           |  |

| TPH 8015M        |        | mg/kg           |            | Analyzed By: MS |     |            |               |        |           |  |
|------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|--------|-----------|--|
| Analyte          | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD    | Qualifier |  |
| GRO C6-C10*      | <10.0  | 10.0            | 10/17/2019 | ND              | 213 | 107        | 200           | 0.0685 |           |  |
| DRO >C10-C28*    | <10.0  | 10.0            | 10/17/2019 | ND              | 217 | 109        | 200           | 4.96   |           |  |
| EXT DRO >C28-C36 | <10.0  | 10.0            | 10/17/2019 | ND              |     |            |               |        |           |  |

Surrogate: 1-Chlorooctane 81.9 % 41-142

Surrogate: 1-Chlorooctadecane 89.6 % 37.6-147

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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---

### 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

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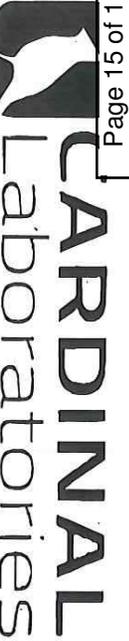
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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

Company Name: Republic Backhoe Service **BILL TO**

Project Manager: Eric Garcia P.O. #:

Address: 47 E. Dickens Rd Company: Read & Stevens

City: Lovington State: NM Zip: 88260 Attn: Joe Tovar

Phone #: 575-631-0131 Fax #: Address: PO Box 1518

Project #: Project Owner: Read & Stevens City: Roswell

Project Name: Lucy Federal #2 State: NM Zip: 88202

Project Location: Lea County Phone #: 575-390-2485

Sampler Name: Eric Garcia Fax #:

FOR LAB USE ONLY MATRIX PRESERV SAMPLING

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | ACID/BASE: | ICE / COOL | OTHER : | DATE     | TIME  | ANALYSIS REQUEST |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|------------|------------|---------|----------|-------|------------------|
| HPD35237 | BR-2        | G                 | 1            |             |            | X    |     |        |         | X          |            |         | 10/16/19 | 8:00  | Chlorides        |
|          | BR-4        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 8:45  | BTEX             |
|          | BR-5        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 9:30  | TPH              |
|          | BR-10       |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 8:40  |                  |
|          | DD-2        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 9:00  |                  |
|          | DD-4        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 9:15  |                  |
|          | DD-5        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 9:25  |                  |
|          | DD-10       |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 9:30  |                  |
|          | CC-2        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 10:30 |                  |
|          | CC-4        |                   |              |             |            |      |     |        |         |            |            |         | 10/16/19 | 10:45 |                  |

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Relinquished By: [Signature] Date: 10-17-19 Time: 09:10  
 Received By: [Signature] Date: [Blank] Time: [Blank]

Delivered By: (Circle One) -2.9°C #497 Sample Condition: Cool Intact  
 Sampler - UPS - Bus - Other: Consulted -2.5°C  Yes  No  Yes  No

CHECKED BY: [Signature] (Initials) YD  
 REMARKS: email results to: eric.garcia@hotmail.com  
 Rush !!

\* Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

October 24, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 10/21/19 13:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/21/2019                 | Sampling Date:      | 10/19/2019     |
| Reported:         | 10/24/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: B3 - 3 (H903587-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 528    | 16.0            | 10/23/2019 | ND           | 448 | 112        | 400           | 0.00 |           |  |

**Sample ID: I- 3 (H903587-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 480    | 16.0            | 10/23/2019 | ND           | 448 | 112        | 400           | 0.00 |           |  |

**Sample ID: N1- 3 (H903587-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 480    | 16.0            | 10/23/2019 | ND           | 448 | 112        | 400           | 0.00 |           |  |

**Sample ID: N-2 - 3 (H903587-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 520    | 16.0            | 10/23/2019 | ND           | 448 | 112        | 400           | 0.00 |           |  |

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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---

### Notes and Definitions

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

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A handwritten signature in black ink that reads "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager





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---

October 08, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 10/08/19 11:05.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/08/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: B - 2 (H903410-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 2560   | 16.0            | 10/08/2019 | ND           | 416 | 104        | 400           | 0.00 |           |  |

**Sample ID: B - 4 (H903410-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: B - 6 (H903410-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: B - 8 (H903410-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 96.0   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/08/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: B - 10 (H903410-05)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: C - 2 (H903410-06)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 4640   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: C - 4 (H903410-07)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 440    | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: C - 6 (H903410-08)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: C - 8 (H903410-09)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/08/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: C - 10 (H903410-10)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: D - 2 (H903410-11)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 3320   | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: D - 4 (H903410-12)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 496    | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: D - 6 (H903410-13)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 160    | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: D - 8 (H903410-14)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 272    | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/08/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: D - 10 (H903410-15)**

| Chloride, SM4500Cl-B | mg/kg      | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|------------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>384</b> | 16.0            | 10/08/2019 | ND           | 400 | 100        | 400           | 7.69 |           |

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---

### Notes and Definitions

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

---

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A handwritten signature in black ink that reads "Caley D. Keene".

---

Caley D. Keene, Lab Director/Quality Manager



8 of 8 pages



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**FILE TO**

**ANALYSIS REQUEST**

|  |  |  |  |
|--|--|--|--|
| Company Name: Republic Backhoe Service<br>Project Manager: Eric Garcia<br>Address: 47 E. Dickens Rd.<br>City: Lovington State: NM Zip: 88260<br>Phone #: 575-631-0131 Fax #:<br>Project #:<br>Project Name: Lucy Federal #2<br>Project Location: Lea County<br>Sampler Name: Eric Garcia |  | P.O. #:<br>Company: Read and Stevens<br>Attn: Joe Taylor<br>Address: PO Box 1518<br>City: Roswell<br>State: NM Zip: 88202<br>Phone #: 575-390-2425   |  |
| Lab I.D. Sample I.D.<br>H903410<br>11 D-2<br>12 D-4<br>13 D-6<br>14 D-8<br>15 D-10   |  | MATRIX<br>(G)RAB OR (C)OMP. # CONTAINERS<br>GROUNDWATER<br>WASTEWATER<br>SOIL<br>OIL<br>SLUDGE<br>OTHER :<br>ACID/BASE:<br>ICE / COOL<br>OTHER :<br>DATE TIME<br>10/7/19 3:30<br>10/7/19 3:40<br>10/7/19 3:50<br>10/7/19 4:05<br>10/7/19 4:15<br>10/7/19 |  |
| Relinquished By: <i>[Signature]</i><br>Date: 10-8-19<br>Time: 11:05  |  | Received By: <i>[Signature]</i><br>Date:<br>Time:  |  |
| Delivered By: (Circle One) 16.12 #97<br>Sampler - UPS - Bus - Other: <i>Collected 16.52</i>  |  | Sample Condition<br>Cool Intact<br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Checked By: (Initials) <i>TO</i>   |  |
| Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Add'l Phone #:<br>Add'l Fax #:<br>REMARKS:<br>email results to:<br>ericgarcia@2@hotmail.com<br>Rusli!!                                 |  | ANALYSIS REQUEST   |  |

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



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October 10, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 10/08/19 11:05.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/10/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: F - 2 (H903411-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 4200   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: F - 4 (H903411-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1010   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: F - 6 (H903411-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1310   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: F - 8 (H903411-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 928    | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/10/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: F - 10 (H903411-05)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 64.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: A - 2 (H903411-06)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 3160   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: A - 4 (H903411-07)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 128    | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: A - 6 (H903411-08)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 96.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: A - 8 (H903411-09)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 64.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/10/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: A - 10 (H903411-10)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: E - 2 (H903411-11)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 4080   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: E - 4 (H903411-12)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 720    | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: E - 6 (H903411-13)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 160    | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: E - 8 (H903411-14)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/10/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: E - 10 (H903411-15)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: G - 2 (H903411-16)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 1920   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: G - 4 (H903411-17)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 208    | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: G - 6 (H903411-18)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 10/09/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: G - 8 (H903411-19)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 10/09/2019 | ND           | 416 | 104        | 400           | 0.00 |           |  |

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 10/08/2019                 | Sampling Date:      | 10/07/2019     |
| Reported:         | 10/10/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: G - 10 (H903411-20)**

| Chloride, SM4500Cl-B | mg/kg       | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|-------------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>16.0</b> | 16.0            | 10/09/2019 | ND           | 416 | 104        | 400           | 0.00 |           |

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Celey D. Keene, Lab Director/Quality Manager



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---

### Notes and Definitions

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

---

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A handwritten signature in black ink that reads "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

6 of 8 pages



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

|  |  |                           |  |
|--|--|---------------------------|--|
| Company Name: Republic Backhoe Service |  | P.O. #:                   |  |
| Project Manager: Eric Garcia           |  | Company: Read and Stevens |  |
| Address: 47 E. Dickens Rd.             |  | Attn: Joe Taylor          |  |
| City: Lovington                        |  | Address: PO Box 1518      |  |
| Phone #: 575-631-0131                  |  | City: Roswell             |  |
| State: NM Zip: 88260                   |  | State: NM Zip: 88202      |  |
| Project #: _____                       |  | Phone #: 575-390-2425     |  |
| Project Name: Lucy Federal #2          |  | Fax #:                    |  |
| Project Location: Lea County           |  | PRESERV:                  |  |
| Sampler Name: Eric Garcia              |  | OTHER:                    |  |
| FOR LAB USE ONLY                       |  | SAAMPLING                 |  |

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |        |            | DATE | TIME    | ANALYSIS |            |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|--------|------------|------|---------|----------|------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER: | ACID/BASE: |      |         |          | ICE / COOL |
| H903411  | F-2         | ✓                 | 1            |             |            | ✓    |     |        |        |            |      | 10/7/19 | 9:15     | X Chloride |
|          | F-4         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 9:30     |            |
|          | F-6         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 9:45     |            |
|          | F-8         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 10:00    |            |
|          | F-10        |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 10:20    |            |
|          | A-2         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 10:52    |            |
|          | A-4         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 10:55    |            |
|          | A-6         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 11:00    |            |
|          | A-8         |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 11:15    |            |
|          | A-10        |                   |              |             |            |      |     |        |        |            |      | 10/7/19 | 11:30    |            |

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Relinquished By: *[Signature]* Date: 10-8-19 Time: 11:05  
 Received By: *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Delivered By: (Circle One) *16.1c* #97 Sample Condition:  Cool  Intact  Yes  No  
 Sampler - UPS - Bus - Other: *PO Box 16.5c*  No  No

Checked By: (Initials) *TD*

REMARKS: email results to: eric.garcia@cardinal.com

Phone Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 Fax Result:  Yes  No Add'l Fax #: \_\_\_\_\_

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

December 02, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 11/25/19 11:40.

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 [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 8 A - 4 (H903997-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 592    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 8 A - 5 (H903997-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 352    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 8 A - 10 (H903997-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 9 A - 2 (H903997-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 9 A - 5 (H903997-05)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 9 A - 10 (H903997-06)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 10 A - 2 (H903997-07)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 80.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 10 A - 5 (H903997-08)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 10 A - 10 (H903997-09)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 720    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 11 A - 2 (H903997-10)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 192    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 11 A - 5 (H903997-11)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 320    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 11 A - 10 (H903997-12)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 304    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 12 A - 2 (H903997-13)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 12 A - 5 (H903997-14)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 176    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 12 A - 10 (H903997-15)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 192    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 13 A - 2 (H903997-16)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 304    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 13 A - 5 (H903997-17)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 272    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 13 A - 10 (H903997-18)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 224    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 14 A - 2 (H903997-19)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 304    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 14 A - 5 (H903997-20)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 336    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 14 A - 10 (H903997-21)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 15 A - 2 (H903997-22)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 15 A - 5 (H903997-23)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 15 A - 10 (H903997-24)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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\* = Accredited Analyte

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**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 16 A - 3 (H903997-25)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 16 A - 5 (H903997-26)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 496    | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 16 A - 10 (H903997-27)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 256    | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 17 A - 4 (H903997-28)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 320    | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 17 A - 5 (H903997-29)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 848    | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/21/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 17 A - 10 (H903997-30)**

| Chloride, SM4500Cl-B | mg/kg       | Analyzed By: AC |            |              |     |            |               |      |           |
|----------------------|-------------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>2720</b> | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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### Notes and Definitions

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

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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

|  |  |                         |  |
|--|--|-------------------------|--|
| Company Name: Republic Backhoe Service |  | P.O. #:                 |  |
| Project Manager: Eric Garcia           |  | Company: Read & Stevens |  |
| Address: 47 E. Dickens Rd.             |  | Attn: Joe Tovar         |  |
| City: Lovington                        |  | Address: PO Box 1518    |  |
| Phone #: 575-631-0131                  |  | State: NM Zip: 88260    |  |
| Project #:                             |  | City: Roswell           |  |
| Project Name: Lucy Federal # 2         |  | State: NM Zip: 88202    |  |
| Project Location: Lea County           |  | Phone #: 575-390-2425   |  |
| Sampler Name: Eric Garcia              |  | Fax #:                  |  |

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |         |            | DATE | TIME | ANALYSIS |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|------------|------|------|----------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | ACID/BASE: |      |      |          |
| H903907  | 8A-4        |                   |              |             |            | X    |     |        |         |            |      |      | Chloride |
| 1        | 8A-5        |                   |              |             |            |      |     |        |         |            |      |      |          |
| 2        | 8A-10       |                   |              |             |            |      |     |        |         |            |      |      |          |
| 3        | 9A-2        |                   |              |             |            |      |     |        |         |            |      |      |          |
| 4        | 9A-5        |                   |              |             |            |      |     |        |         |            |      |      |          |
| 5        | 9A-10       |                   |              |             |            |      |     |        |         |            |      |      |          |
| 6        | 10A-2       |                   |              |             |            |      |     |        |         |            |      |      |          |
| 7        | 10A-5       |                   |              |             |            |      |     |        |         |            |      |      |          |
| 8        | 10A-10      |                   |              |             |            |      |     |        |         |            |      |      |          |
| 9        | 11A-2       |                   |              |             |            |      |     |        |         |            |      |      |          |
| 10       | 11A-2       |                   |              |             |            |      |     |        |         |            |      |      |          |

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Relinquished By: *[Signature]* Date: 11-25-19 Time: 11:40  
 Received By: *[Signature]* Date: 11-25-19 Time: 11:40

Delivered By: (Circle One) 19.82 *[Signature]*  
 Sampler - UPS - Bus - Other: *[Signature]*  
 Sample Condition: Cool  Intact   
 Yes  No  Yes  No

Phone Result:  Yes  No  Add'l Phone #:  
 Fax Result:  Yes  No  Add'l Fax #:  
 REMARKS: email results to: ericgarcia@cardinal.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

ANALYSIS REQUEST

|   |             |   |              |             |            |      |     |         |          |      |      |          |
|---|-------------|---|--------------|-------------|------------|------|-----|---------|----------|------|------|----------|
| Company Name: Republic Backhoe Service<br>Project Manager: Eric Garcia<br>Address: 47 E. Dickens Rd<br>City: Lovington State: NM Zip: 88260<br>Phone #: 575-631-0131 Fax #: _____<br>Project #: _____<br>Project Name: Lucy Federal #2<br>Project Location: Lea County<br>Sampler Name: Eric Garcia |             | P.O. #: _____<br>Company: Read & Stevens<br>Attn: Joe Tovar<br>Address: PO Box 1518<br>City: Roswell<br>State: NM Zip: 88202<br>Phone #: 575-390-2425<br>Fax #: _____ |              |             |            |      |     |         |          |      |      |          |
| FOR LAB USE ONLY  |             |   |              |             |            |      |     |         |          |      |      |          |
| Lab I.D.  | Sample I.D. | (G)RAB OR (C)OMP.   | # CONTAINERS | MATRIX      |            |      |     | PRESERV | SAMPLING | DATE | TIME | ANALYSIS |
|   |             |   |              | GROUNDWATER | WASTEWATER | SOIL | OIL |         |          |      |      |          |
| 11903997  | 11A-5       | X   | 1            |             |            |      |     |         |          |      |      | Chloride |
| 12  | 11A-10      |   |              |             |            |      |     |         |          |      |      |          |
| 13  | 12A-2       |   |              |             |            |      |     |         |          |      |      |          |
| 14  | 12A-3       |   |              |             |            |      |     |         |          |      |      |          |
| 15  | 12A-10      |   |              |             |            |      |     |         |          |      |      |          |
| 16  | 13A-2       |   |              |             |            |      |     |         |          |      |      |          |
| 17  | 13A-5       |   |              |             |            |      |     |         |          |      |      |          |
| 18  | 13A-10      |   |              |             |            |      |     |         |          |      |      |          |
| 19  | 14A-2       |   |              |             |            |      |     |         |          |      |      |          |
| 20  | 14A-5       |   |              |             |            |      |     |         |          |      |      |          |

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Relinquished By: *[Signature]*  
 Date: 11/25/19  
 Time: 1:40  
 Received By: *[Signature]*  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Delivered By: (Circle One) 19.8  
 Sampler - UPS - Bus - Other: *[Handwritten]*  
 Sample Condition:  Intact  Cool  Yes  No  
 Checked By: *[Signature]*

Phone Result:  Yes  No  
 Fax Result:  Yes  No  
 Add'l Phone #: \_\_\_\_\_  
 Add'l Fax #: \_\_\_\_\_

REMARKS: email results to: [ericgarcia@20hotmail.com](mailto:ericgarcia@20hotmail.com)

\* Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: Republic Backhoe Service  
 Project Manager: Eric Garcia  
 Address: 47 E. Dickens Rd.  
 City: Lovington State: NM Zip: 88260  
 Phone #: 575-631-0131 Fax #:  
 Project #:

P.O. #:  
 Company: Read & Stevens  
 Attn: Joe Tovar  
 Address: PO Box 1518  
 City: Roswell

State: NM Zip: 88202  
 Phone #: 575-390-2425  
 Fax #:

Project Name: Lucn Federal #2  
 Project Location: Lea County  
 Sample Name: Eric Garcia

FOR LAB USE ONLY

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |          | DATE | TIME | ANALYSIS REQUEST |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|----------|------|------|------------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER :  |      |      |                  |
| H9D3997  | 14A-10      | X                 |              |             |            |      |     |        |          |      |      | Chloride         |
|          | 21 15A-2    |                   |              |             |            |      |     |        | 11/21/19 | 1:50 |      |                  |
|          | 22 15A-5    |                   |              |             |            |      |     |        | 11/21/19 | 2:30 |      |                  |
|          | 23 15A-10   |                   |              |             |            |      |     |        | 11/21/19 | 2:40 |      |                  |
|          | 24 16A-3    |                   |              |             |            |      |     |        | 11/21/19 | 3:15 |      |                  |
|          | 25 16A-5    |                   |              |             |            |      |     |        | 11/21/19 | 3:25 |      |                  |
|          | 26 16A-10   |                   |              |             |            |      |     |        | 11/21/19 | 3:40 |      |                  |
|          | 27 17A-4    |                   |              |             |            |      |     |        | 11/21/19 | 4:00 |      |                  |
|          | 28 17A-5    |                   |              |             |            |      |     |        | 11/21/19 | 4:10 |      |                  |
|          | 29 17A-10   |                   |              |             |            |      |     |        | 11/21/19 | 4:20 |      |                  |

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Relinquished By: *[Signature]*  
 Date: 11-25-19  
 Time: 11:40

Received By: *[Signature]*  
 Date:   
 Time:   
 Received By: *[Signature]*

Delivered By: (Circle One) 19.8%  
 Sampler - UPS - Bus - Other: *[Handwritten]*  
 Sample Condition: Cool  Intact   
 Yes  No

CHECKED BY: (Initials) *[Initials]*  
 Phone Result:  Yes  No  
 Fax Result:  Yes  No  
 Add'l Phone #:   
 Add'l Fax #:   
 REMARKS: email results to: eric.garcia@22@hotmail.com

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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December 02, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 11/25/19 11:40.

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 [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/20/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 1 A - 2 (H903996-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 1 A - 5 (H903996-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 80.0   | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 1 A - 10 (H903996-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 2 A - 2 (H903996-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 432    | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/20/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 2 A - 5 (H903996-05)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 96.0   | 16.0            | 11/27/2019 | ND           | 400 | 100        | 400           | 7.69 |           |  |

**Sample ID: 2 A - 10 (H903996-06)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 80.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 3 A - 2 (H903996-07)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 80.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 3 A - 5 (H903996-08)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 992    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 3 A - 10 (H903996-09)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/20/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 4 A - 3 (H903996-10)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 352    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 4 A - 5 (H903996-11)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 768    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 4 A - 10 (H903996-12)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 16.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 5 A - 2 (H903996-13)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 80.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 5 A - 5 (H903996-14)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/20/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 5 A - 10 (H903996-15)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 6 A - 2 (H903996-16)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 6 A - 5 (H903996-17)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 48.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 6 A - 10 (H903996-18)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 64.0   | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

**Sample ID: 7 A - 2 (H903996-19)**

| Chloride, SM4500Cl-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 112    | 16.0            | 11/27/2019 | ND           | 432 | 108        | 400           | 0.00 |           |  |

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/25/2019                 | Sampling Date:      | 11/20/2019     |
| Reported:         | 12/02/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: 7 A - 5 (H903996-20)**

| Chloride, SM4500Cl-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 16.0   | 16.0            | 11/27/2019      | ND           | 432 | 108        | 400           | 0.00 |           |

**Sample ID: 7 A - 10 (H903996-21)**

| Chloride, SM4500Cl-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | <16.0  | 16.0            | 11/27/2019      | ND           | 432 | 108        | 400           | 0.00 |           |

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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Cardinal Laboratories

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A handwritten signature in black ink that reads "Caley D. Keene".

---

Caley D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

Company Name: Republic Backhoe Service  
 Project Manager: Eric Garcia  
 Address: 47 E Dickens Rd  
 City: Lovington State: NM Zip: 88260  
 Phone #: 575-631-0131 Fax #:  
 Project #:   
 Project Name: Lucy Federal #2  
 Project Location: Leo County  
 Sampler Name: Eric Garcia  
 P.O. #:   
 Company: Read & Stevens  
 Attn: Joe Tovar  
 Address: PO Box 1518  
 City: Roswell  
 State: NM Zip: 88202  
 Phone #: 575-390-2425 Fax #:

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |         |            | DATE | TIME | ANALYSIS REQUEST |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|------------|------|------|------------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | ACID/BASE: |      |      |                  |
| H903906  | 1A-2        |                   | 1            |             |            | X    |     |        |         |            |      |      | Chloride         |
|          | 1A-5        |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 1A-10       |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 2A-2        |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 2A-5        |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 2A-10       |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 3A-2        |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 3A-5        |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 3A-10       |                   | 1            |             |            |      |     |        |         |            |      |      |                  |
|          | 4A-3        |                   | 1            |             |            |      |     |        |         |            |      |      |                  |

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Relinquished By: *[Signature]* Date: 11-25-19  
 Received By: *[Signature]* Date: 11-14-19

Delivered By: (Circle One) 19.8% #97  
 Sampler - UPS - Bus - Other: *Conservation*  
 Sample Condition: Cool  Intact   
 Checked By: *[Signature]* (Initials) *TS*

REMARKS: email results to: ericgarcia@2@hotmail.com

\* Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: Republic Backhoe Service  
Project Manager: Eric Garcia  
Address: 47 E Dickens Rd  
City: Lovington State: NM Zip: 88260  
Phone #: 575-631-0131 Fax #:  
Project #:   
Project Name: Lucy Federal #2  
Project Location: Lea County  
Sampler Name: Eric Garcia  
FOR LAB USE ONLY

P.O. #:   
Company: Read & Stevens  
Attn: Joe Tovar  
Address: PO Box 1518  
City: Roswell  
State: NM Zip: 88202  
Phone #: 575-390-2425  
Fax #:

| Lab I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | MATRIX      |            |      |     |        |         |            | DATE | TIME     | ANALYSIS REQUEST |            |
|----------|-------------|-------------------|--------------|-------------|------------|------|-----|--------|---------|------------|------|----------|------------------|------------|
|          |             |                   |              | GROUNDWATER | WASTEWATER | SOIL | OIL | SLUDGE | OTHER : | ACID/BASE: |      |          |                  | ICE / COOL |
| H9D34916 | 7A-10       | S                 | 5            |             |            | X    |     |        |         |            |      | 11/20/19 | 4:30             | Chloride   |
|          |             |                   |              |             |            |      |     |        |         |            |      |          |                  |            |

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Relinquished By: [Signature] Date: 11-25-19 Time: 11:48  
Received By: [Signature] Date: 11-20-19 Time: 4:30  
Delivered By: (Circle One) 19.8  
Sampler - UPS - Bus - Other: [Signature] 30.2  
Sample Condition: Cool Intact Yes [X] No [ ]  
Checked By: [Signature] (Initials) Yea

REMARKS: email results to: eric.garcia@20hotmail.com  
Phone Result: Yes [ ] No [ ] Add'l Phone #:   
Fax Result: Yes [ ] No [ ] Add'l Fax #:   
† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

November 26, 2019

ERIC GARCIA  
REPUBLIC BACKHOE SERVICES  
47 E. DICKENS RD  
LOVINGTON, NM 88260

RE: LUCY FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 11/22/19 11:20.

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 [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly legible.

Mike Snyder For Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/22/2019                 | Sampling Date:      | 11/19/2019     |
| Reported:         | 11/26/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: N 3 - 2 (H903973-01)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 352    | 16.0            | 11/26/2019 | ND           | 416 | 104        | 400           | 0.00 |           |  |

**Sample ID: N 3 - 5 (H903973-02)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 784    | 16.0            | 11/26/2019 | ND           | 416 | 104        | 400           | 0.00 |           |  |

**Sample ID: N 3 - 10 (H903973-03)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 960    | 16.0            | 11/26/2019 | ND           | 416 | 104        | 400           | 0.00 |           |  |

**Sample ID: N 4 - 2 (H903973-04)**

| Chloride, SM4500CI-B | mg/kg  | Analyzed By: AC |            |              |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|--------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 176    | 16.0            | 11/26/2019 | ND           | 416 | 104        | 400           | 0.00 |           |  |

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

REPUBLIC BACKHOE SERVICES  
 ERIC GARCIA  
 47 E. DICKENS RD  
 LOVINGTON NM, 88260  
 Fax To: NONE

|                   |                            |                     |                |
|-------------------|----------------------------|---------------------|----------------|
| Received:         | 11/22/2019                 | Sampling Date:      | 11/19/2019     |
| Reported:         | 11/26/2019                 | Sampling Type:      | Soil           |
| Project Name:     | LUCY FEDERAL #2            | Sampling Condition: | ** (See Notes) |
| Project Number:   | NONE GIVEN                 | Sample Received By: | Tamara Oldaker |
| Project Location: | READ & STEVENS - LEA CO NM |                     |                |

**Sample ID: N 4 - 5 (H903973-05)**

| Chloride, SM4500Cl-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 96.0   | 16.0            | 11/26/2019      | ND           | 416 | 104        | 400           | 0.00 |           |

**Sample ID: N 4 - 10 (H903973-06)**

| Chloride, SM4500Cl-B | mg/kg  |                 | Analyzed By: AC |              |     |            |               |      |           |
|----------------------|--------|-----------------|-----------------|--------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed        | Method Blank | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 240    | 16.0            | 11/26/2019      | ND           | 416 | 104        | 400           | 0.00 |           |

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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### 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

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Cardinal Laboratories

\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

