

**OXY USA, Inc.  
Righthand Canyon 34 Fed Battery  
Closure Report**

**Section 34, T21S, R24E  
Eddy County, New Mexico**

**2RP-2790  
April 1, 2015**



**Prepared for:**

**OXY USA, Inc.  
1017 W Stanolind Road  
Hobbs, New Mexico 88240**

**By:**

**Safety & Environmental Solutions, Inc.  
703 East Clinton Street  
Hobbs, New Mexico 88240  
(575) 397-0510**

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## I. Company Contacts

| Representative | Company       | Telephone    | E-mail   |
|----------------|---------------|--------------|--|
| Chris Jones    | OXY USA, INC. | 575-499-3337 | <a href="mailto:Christopher_Jones@oxy.com">Christopher_Jones@oxy.com</a> |
| Bob Allen      | SESI          | 575-397-0510 | <a href="mailto:ballen@sesi-nm.com">ballen@sesi-nm.com</a>               |

## II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by OXY USA, INC to perform site assessment of a release area at the Righthand Canyon 34 Fed Battery located in Section 34 of Township 21 South, Range 24 East, Eddy County, New Mexico.

According to the C-141: on January 10, 2015: a 4 inch Victrollic on a water line became detached creating an impacted area of approximately 384 sq. ft. inside battery area.

## III. Surface and Ground Water

The nearest groundwater of record is approximately 1.0 mile Northeast of the site. The New Mexico Office of State Engineer record is in Section 26 Range 24 East and Township 21 South. The reported depth was 150 feet below ground surface (BGS).

## IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH).

| Depth to Ground Water:   |                       |           |   |
|--|-----------------------|-----------|---|
| (Vertical distance from contaminants to seasonal high water elevation of groundwater)                          | Less than 50 feet     | 20 points |   |
|  | 50 feet to 99 feet    | 10 points |   |
|  | >100 feet             | 0 points  | X |
| Wellhead Protection Area:  |                       |           |   |
| (Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources) | Yes                   | 20 points |   |
|  | No                    | 0 points  | X |
| Distance to Surface Water:   |                       |           |   |
| (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)        | Less than 200 feet    | 20 points |   |
|  | 200 feet to 1000 feet | 10 points |   |
|  | >1000 feet            | 0 points  | X |
| RANKING SCORE (TOTAL POINTS)   |                       |           | 0 |

## V. Work Performed

On January 12, 2015, SESI was onsite to perform a preliminary assessment and map the spill location.

On March 24, 2015 SESI personnel revisited the site to determine the vertical, as well as the horizontal extent of impact. Due to the nature of the naturally occurring hard shale in the area it was determined that "hand excavation" would be used combined with field sampling and testing of the soil. The vertical delineation efforts consisted of Two Sample Bottom hole representative soil samples that were retrieved at a depth of 6" bgs. Sample South Wall was taken from the south wall of the excavation area, as well as the North, East, and West walls in order to confirm the horizontal extent. All samples were properly packaged, preserved and transported to a commercial Laboratory, Hobbs New Mexico and analyzed for Benzene, Toluene, Ethylbenzene, Xylenes, Total BTEX, Chloride (Cl) (Method SM4500Cl-B), as well as Total Petroleum Hydrocarbons TPH, consisting of GRO and DRO constituents. The results of the analysis are presented in the table below:

| Sample Date<br>03/05/2015 | Sample ID  | Total<br>BTEX | Chloride<br>(Cl) | GRO<br>(C <sub>6</sub> -C <sub>10</sub> )<br>(mg/kg) | DRO<br>(>C <sub>10</sub> -C <sub>28</sub> )<br>(mg/kg) |
|---------------------------|------------|---------------|------------------|--|--|
| Location                  | Method     |               | Method           |  |  |
| SP-1 Bottom at 6"         | BTEX 8021B | <9.89         | 32.0             | 118  | 1900   |
| SP-2 Bottom at 6"         | BTEX 8021B | <11.5         | 32.0             | <116   | <1790  |
| SP3-South Wall            | BTEX 8021B | <0.300        | 128              | <10.0  | <150   |
| SP4-West Wall             | BTEX 8021B | <.300         | 224              | <10.0  | <10.0  |
| SP5-North Wall            | BTEX 8021B | <.300         | <16.0            | <10.0  | <10.0  |
| SP6-East Wall             | BTEX 8021B | <.300         | 64.0             | <10.0  | <10.0  |

#### **VI. Closure**

Due to the number of lines in the area, as well as the presence of hard shale the above laboratory analyses sufficed for acceptable levels of BTEX, TPH and Chloride levels. No further action was deemed prudent and the excavation was backfilled with 3/8" pea gravel, esthetically restoring the battery area. Therefore, Safety and Environmental Solutions, Inc. respectfully requests closure of the regulatory file related to this incident on the aforementioned site.

#### **VII. Figures & Appendices**

Figure 1 – Vicinity Map  
Figure 2 – Site Plan  
Appendix A – Analytical Results  
Appendix B – C-141  
Appendix C – Site Photographs  
Appendix D – Groundwater Study

**Figure 1**  
**Vicinity Map**



Righthand Canyon 34 Fed Batt.

© 2015 Google

Google earth

## **Figure 2**

### **Site Plan**





**Righthand Canyon 34 Fed Battery**





# **Appendix A**

## **Analytical Results**

March 27, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: NMN RIGHT HAND CANYON #34 FEDERAL

Enclosed are the results of analyses for samples received by the laboratory on 03/25/15 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/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

**Analytical Results For:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

|                   |                                  |                     |               |
|-------------------|----------------------------------|---------------------|---------------|
| Received:         | 03/25/2015                       | Sampling Date:      | 03/24/2015    |
| Reported:         | 03/27/2015                       | Sampling Type:      | Soil          |
| Project Name:     | NMN RIGHT HAND CANYON #34 FEDER/ | Sampling Condition: | Cool & Intact |
| Project Number:   | OXY-15-003                       | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM                  |                     |               |

**Sample ID: SP-1 BOTTOM (H500795-01)**

| BTX 8021B             |              | mg/kg           |            | Analyzed By: ms |      |            |               |      |           |
|-----------------------|--------------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte               | Result       | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*              | <0.050       | 0.050           | 03/26/2015 | ND              | 2.16 | 108        | 2.00          | 1.54 |           |
| <b>Toluene*</b>       | <b>0.809</b> | 0.050           | 03/26/2015 | ND              | 1.96 | 97.8       | 2.00          | 1.01 |           |
| <b>Ethylbenzene*</b>  | <b>0.700</b> | 0.050           | 03/26/2015 | ND              | 1.94 | 97.2       | 2.00          | 1.81 |           |
| <b>Total Xylenes*</b> | <b>8.38</b>  | 0.150           | 03/26/2015 | ND              | 5.86 | 97.7       | 6.00          | 1.49 |           |
| <b>Total BTX</b>      | <b>9.89</b>  | 0.300           | 03/26/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

| Chloride, SM4500Cl-B |             | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>32.0</b> | 16.0            | 03/26/2015 | ND              | 432 | 108        | 400           | 3.77 |           |

| TPH 8015M              |             | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |
|------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte                | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |
| <b>GRO C6-C10</b>      | <b>118</b>  | 10.0            | 03/27/2015 | ND              | 203 | 102        | 200           | 0.802 |           |
| <b>DRO &gt;C10-C28</b> | <b>1900</b> | 10.0            | 03/27/2015 | ND              | 212 | 106        | 200           | 1.15  |           |

Surrogate: 1-Chlorooctane 114 % 47.2-157

Surrogate: 1-Chlorooctadecane 123 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

|                   |                                  |                     |               |
|-------------------|----------------------------------|---------------------|---------------|
| Received:         | 03/25/2015                       | Sampling Date:      | 03/24/2015    |
| Reported:         | 03/27/2015                       | Sampling Type:      | Soil          |
| Project Name:     | NMN RIGHT HAND CANYON #34 FEDER/ | Sampling Condition: | Cool & Intact |
| Project Number:   | OXY-15-003                       | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM                  |                     |               |

**Sample ID: SP-2 BOTTOM (H500795-02)**

| BTEx 8021B     |        | mg/kg           |            | Analyzed By: ms |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 2.20 | 110        | 2.00          | 3.92 |           |
| Toluene*       | 0.840  | 0.050           | 03/26/2015 | ND              | 1.98 | 98.9       | 2.00          | 2.08 |           |
| Ethylbenzene*  | 0.804  | 0.050           | 03/26/2015 | ND              | 1.97 | 98.3       | 2.00          | 3.29 |           |
| Total Xylenes* | 9.81   | 0.150           | 03/26/2015 | ND              | 5.92 | 98.7       | 6.00          | 2.84 |           |
| Total BTEX     | 11.5   | 0.300           | 03/26/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 117 % 61-154

| Chloride, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | 32.0   | 16.0            | 03/26/2015 | ND              | 432 | 108        | 400           | 3.77 |           |  |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: MS |     |            |               |       |           |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|-------|-----------|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD   | Qualifier |
| GRO C6-C10   | 116    | 10.0            | 03/27/2015 | ND              | 203 | 102        | 200           | 0.802 |           |
| DRO >C10-C28 | 1790   | 10.0            | 03/27/2015 | ND              | 212 | 106        | 200           | 1.15  |           |

Surrogate: 1-Chlorooctane 110 % 47.2-157

Surrogate: 1-Chlorooctadecane 122 % 52.1-176

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\*=Accredited Analyte

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|                   |                                  |                     |               |
|-------------------|----------------------------------|---------------------|---------------|
| Received:         | 03/25/2015                       | Sampling Date:      | 03/24/2015    |
| Reported:         | 03/27/2015                       | Sampling Type:      | Soil          |
| Project Name:     | NMN RIGHT HAND CANYON #34 FEDER/ | Sampling Condition: | Cool & Intact |
| Project Number:   | OXY-15-003                       | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM                  |                     |               |

**Sample ID: SP-3 SOUTH WALL (H500795-03)**

| BTEx 8021B     |        | mg/kg           |            | Analyzed By: ms |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 2.20 | 110        | 2.00          | 3.92 |           |
| Toluene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 1.98 | 98.9       | 2.00          | 2.08 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 03/26/2015 | ND              | 1.97 | 98.3       | 2.00          | 3.29 |           |
| Total Xylenes* | <0.150 | 0.150           | 03/26/2015 | ND              | 5.92 | 98.7       | 6.00          | 2.84 |           |
| Total BTEx     | <0.300 | 0.300           | 03/26/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 105 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 128    | 16.0            | 03/26/2015 | ND              | 432 | 108        | 400           | 3.77 |           |

| 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            | 03/27/2015 | ND              | 203 | 102        | 200           | 0.802 |           |
| DRO >C10-C28 | 150    | 10.0            | 03/27/2015 | ND              | 212 | 106        | 200           | 1.15  |           |

Surrogate: 1-Chlorooctane 88.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 120 % 52.1-176

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Bob Allen  
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Fax To: (575) 393-4388

|                   |                                  |                     |               |
|-------------------|----------------------------------|---------------------|---------------|
| Received:         | 03/25/2015                       | Sampling Date:      | 03/24/2015    |
| Reported:         | 03/27/2015                       | Sampling Type:      | Soil          |
| Project Name:     | NMN RIGHT HAND CANYON #34 FEDER/ | Sampling Condition: | Cool & Intact |
| Project Number:   | OXY-15-003                       | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM                  |                     |               |

**Sample ID: SP-4 WEST WALL (H500795-04)**

| BTEx 8021B     |        | mg/kg           |            | Analyzed By: ms |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 2.20 | 110        | 2.00          | 3.92 |           |  |
| Toluene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 1.98 | 98.9       | 2.00          | 2.08 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 03/26/2015 | ND              | 1.97 | 98.3       | 2.00          | 3.29 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 03/26/2015 | ND              | 5.92 | 98.7       | 6.00          | 2.84 |           |  |
| Total BTEx     | <0.300 | 0.300           | 03/26/2015 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 224    | 16.0            | 03/26/2015 | ND              | 432 | 108        | 400           | 3.77 |           |

| 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            | 03/27/2015 | ND              | 203 | 102        | 200           | 0.802 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 03/27/2015 | ND              | 212 | 106        | 200           | 1.15  |           |

Surrogate: 1-Chlorooctane 96.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 101 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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|                   |                                  |                     |               |
|-------------------|----------------------------------|---------------------|---------------|
| Received:         | 03/25/2015                       | Sampling Date:      | 03/24/2015    |
| Reported:         | 03/27/2015                       | Sampling Type:      | Soil          |
| Project Name:     | NMN RIGHT HAND CANYON #34 FEDER/ | Sampling Condition: | Cool & Intact |
| Project Number:   | OXY-15-003                       | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM                  |                     |               |

**Sample ID: SP-5 NORTH WALL (H500795-05)**

| BTX 8021B      |        | mg/kg           |            | Analyzed By: ms |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 2.20 | 110        | 2.00          | 3.92 |           |
| Toluene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 1.98 | 98.9       | 2.00          | 2.08 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 03/26/2015 | ND              | 1.97 | 98.3       | 2.00          | 3.29 |           |
| Total Xylenes* | <0.150 | 0.150           | 03/26/2015 | ND              | 5.92 | 98.7       | 6.00          | 2.84 |           |
| Total BTX      | <0.300 | 0.300           | 03/26/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 105 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |  |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| Chloride             | <16.0  | 16.0            | 03/26/2015 | ND              | 432 | 108        | 400           | 3.77 |           |  |

| 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            | 03/27/2015 | ND              | 203 | 102        | 200           | 0.802 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 03/27/2015 | ND              | 212 | 106        | 200           | 1.15  |           |

Surrogate: 1-Chlorooctane 90.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 104 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

|                   |                                  |                     |               |
|-------------------|----------------------------------|---------------------|---------------|
| Received:         | 03/25/2015                       | Sampling Date:      | 03/24/2015    |
| Reported:         | 03/27/2015                       | Sampling Type:      | Soil          |
| Project Name:     | NMN RIGHT HAND CANYON #34 FEDER/ | Sampling Condition: | Cool & Intact |
| Project Number:   | OXY-15-003                       | Sample Received By: | Jodi Henson   |
| Project Location: | EDDY COUNTY, NM                  |                     |               |

**Sample ID: SP-6 EAST WALL (H500795-06)**

| BTEx 8021B     |        | mg/kg           |            | Analyzed By: ms |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 2.20 | 110        | 2.00          | 3.92 |           |
| Toluene*       | <0.050 | 0.050           | 03/26/2015 | ND              | 1.98 | 98.9       | 2.00          | 2.08 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 03/26/2015 | ND              | 1.97 | 98.3       | 2.00          | 3.29 |           |
| Total Xylenes* | <0.150 | 0.150           | 03/26/2015 | ND              | 5.92 | 98.7       | 6.00          | 2.84 |           |
| Total BTEX     | <0.300 | 0.300           | 03/26/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

| Chloride, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 64.0   | 16.0            | 03/26/2015 | ND              | 432 | 108        | 400           | 3.77 |           |

| 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            | 03/27/2015 | ND              | 203 | 102        | 200           | 0.802 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 03/27/2015 | ND              | 212 | 106        | 200           | 1.15  |           |

Surrogate: 1-Chlorooctane 96.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 109 % 52.1-176

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\*=Accredited Analyte

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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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |

---

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Celey D. Keene, Lab Director/Quality Manager





101 East Marland, Hobbs, NM 88240  
(505) 393-2326 Fax (505) 393-2476

Page of

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

|   |  |   |                   |
|---|--|---|-------------------|
| Company Name: <b>Safety &amp; Environmental Solutions, Inc.</b> |  | P.O. #:   |                   |
| Project Manager: <b>Bob Allen</b>                               |  | Company: <b>Same</b>  |                   |
| Address: <b>703 East Clinton</b>                                |  | Attn: <b>Jones, Charles</b>   |                   |
| City: <b>Hobbs</b>  | State: <b>NM</b>   | Zip: <b>88240</b>   | Address:          |
| Phone #: <b>575-397-0510</b>                                    | Fax #: <b>575-393-4388</b>   | City: <b>Hobbs</b>  |                   |
| Project #: <b>04-15-003</b>                                     | Project Owner: <b>OHY</b>  | State: <b>NM</b>  | Zip: <b>88240</b> |
| Project Name: <b>Mud Right Hand Canyon 347ED</b>                | Phone #: <b>575-409-3337</b>   | Fax #:  |                   |
| Project Location: <b>ESBY CO</b>                                | Sample Name: <b>SOS- Jerry</b>   | For Lab Use Only  |                   |
| Lab I.D.:   | Sample I.D.:   | Matrix  |                   |
| <b>HSD095</b><br>1<br>2<br>3<br>4<br>5<br>6                     | SP-1 Bottom<br>SP-2 Bottom<br>SP-3 Southern<br>SP-4 Western<br>SP-5 Northern<br>SP-6 Eastern | (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: | DATE<br>TIME      |
|   |  |   |                   |
|   |  |   |                   |
|   |  |   |                   |
|   |  |   |                   |
|   |  |   |                   |
| TP4 (8015)<br>BTEX<br>CHLORIDES                                 |  |   |                   |

PLEASE NOTE: Liability and Damages: Customer's liability and efforts to recover for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses, 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 service. 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 subcontractors 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice and all costs of collections, including attorney's fees.

Relinquished By: *[Signature]*

Received By: *[Signature]*

Date: **03/25/15**

Time: **0800**

Temp. **2.40C**

Sample Condition: ☒ Cool ☒ Intact ☐ Yes ☐ No

Checked By: *[Signature]*

Phone Result: ☐ Yes ☐ No

Fax Result: ☐ Yes ☐ No

Remarks:

+ Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

# **Appendix B**

## **C-141**

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

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

|  |                            |
|--|----------------------------|
| Name of Company: OXY Permian                   | Contact: Christopher Jones |
| Address: 1502 W Commerce Dr.                   | Telephone No. 575-499-3337 |
| Facility Name: Righthand Canyon 34 Fed Battery | Facility Type:             |
| Surface Owner                                  | Mineral Owner              |
| API No. 30-015-32807                           |                            |

**LOCATION OF RELEASE**

|                  |                |                  |              |                       |                       |                       |                     |                 |
|------------------|----------------|------------------|--------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------|
| Unit Letter<br>O | Section:<br>34 | Township:<br>21S | Range<br>24E | Feet from the<br>1176 | North/South Line<br>S | Feet from the<br>2123 | East/West Line<br>E | County:<br>Eddy |
|------------------|----------------|------------------|--------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------|

Latitude 32.40178 Longitude -104.5229

**NATURE OF RELEASE**

|  |   |  |
|--|---|--|
| Type of Release: Produced Water  | Volume of Release: 8-10 BBLs<br>Water     | Volume Recovered:<br>0                   |
| Source of Release:<br>Victrollic   | Date and Hour of Occurrence:<br>1/10/2015 | Date and Hour of Discovery:<br>1/10/2015 |
| Was Immediate Notice Given?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required   | If YES, To Whom?                          |  |
| By Whom?   | Date and Hour:                            |  |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | If YES, Volume Impacting the Watercourse. |  |
| If a Watercourse was Impacted, Describe Fully.*  |   |  |
| Describe Cause of Problem and Remedial Action Taken.*  |   |  |
| 4 inch Victrollic on water line came loose causing an impact an approximate 384 sq. ft. of ground area in battery area.  |   |  |
| Describe Area Affected and Cleanup Action Taken.*  |   |  |
| Safety & Environmental Solutions, Inc. submitted a plan of remediation to regulatory authorities on February 18, 2015 and was approved on 02-19-2015 and 02-23-2015 respectively by said authorities. Work was complete and final labs submitted on March 24, 2015.  |   |  |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |   |  |
| Signature: <b>Chris Jones</b><br><small>Digitally signed by Chris Jones<br/>DN: cn=Chris Jones, o=ox, email=ckjones00@yahoo.com, c=US<br/>Date: 2015.03.31 20:48:46 -05'00'</small>  | <b>OIL CONSERVATION DIVISION</b>          |  |
| Printed Name Christopher Jones:  | Approved by Environmental Specialist:     |  |
| Title: HES Specialist  | Approval Date:                            | Expiration Date:                         |
| E-mail Address: Christopher_jones@oxy.com  | Conditions of Approval:                   | Attached <input type="checkbox"/>        |
| Date: 3-31-15 Phone: 575-499-3337  |   |  |

\* Attach Additional Sheets If Necessary

HES Specialist

3-31-15

## **Appendix C**

### **Site Photographs**



# Site Photographs

NMN Right Hand Canyon #34 Federal Battery  
Unit Letter O, Sec.34, TS 21S, R 24E



Location January 2015







March 2015 Backfill NE



March 2015 Backfill North



March 2015 Backfill South



March 2015 Backfill West

## **Appendix D**

# **Groundwater Study**



# 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 (quarters are 1=NW 2=NE 3=SW 4=SE)

closed) (quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

| POD Number | POD Sub-Code |        | Q Q Q |    |    | Sec | Tws | Rng    | X        | Y | Depth Well | Depth Water | Water Column |
|------------|--------------|--------|-------|----|----|-----|-----|--------|----------|---|------------|-------------|--------------|
|            | basin        | County | 64    | 16 | 4  |     |     |        |          |   |            |             |              |
| C 01136    | C            | ED     | 4     | 3  | 28 | 21S | 24E | 546455 | 3589868* |   | 138        | 83          | 55           |
| C 01530    | C            | ED     | 1     | 2  | 26 | 21S | 24E | 550416 | 3591200* |   | 185        | 150         | 35           |

Average Depth to Water: 116 feet

Minimum Depth: 83 feet

Maximum Depth: 150 feet

**Record Count: 2**

**PLSS Search:**

Section(s): 26, 27, 28, 33, 35 Township: 21S Range: 24E

\*UTM location was derived from PLSS - see Help

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