District i 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 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

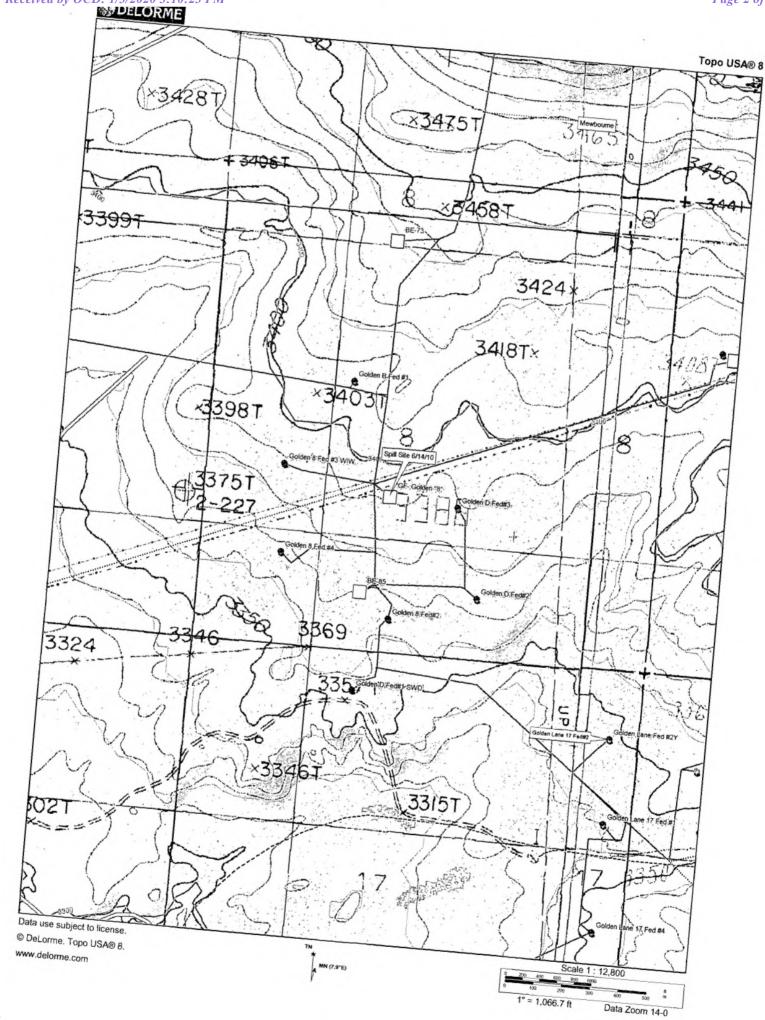
RECEIVED

Form C-141 Revised October 10, 2003

JUN 22 2010Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back **NMOCD ARTESIA** 

side of form

|   | 35646  | 177  |  |  |  | OPERA'   | ГOR  | $\boxtimes$   | Initia  | al Report    Final Re   |
|---|--|--|--|--|--|--|--|---|---|---|
| Name of Company BOPCO, L.P. 260737  |  |  |  | (  | Contact Tor  | y Savoie   |  |   |   |   |
|   |  |  |  |  |  |  | No. 432-556-87.  | 30  |   |   |
| Facility Na   | me: Golde  | n 8 Federal I  | Battery #1   |  | I  | Facility Typ   | e E&P  |   |   |   |
| Surface Owner Federal Mineral Owner F   |  |  |  |  | ederal   |  | ]  | Lease N   | No.   |   |
|   |  |  |  | LOCA   | TION   | OF REI   | LEASE  |   |   |   |
| Unit Letter   |  |  | North/   | South Line   | Feet from the  | East/Wes   | st Line  | County<br>Eddy  |   |   |
|   |  |  | L  | atitude_N 32.49  | _  |  |  | 47  |   |   |
| Type of Rele  | ase: Crude   | oil  |  | NAT  | URE  | OF REL   | Release: 90 Bbls   | of V  | Jolume I  | Recovered: 80 bbls of crude of  |
| Type of Refe  | asc. Crude   | OII  |  |  |  | Crude oil  | Release, 90 DDIS   | V   | olume r   | recovered, or bots of crude o   |
| Source of Re  | lease: Drain   | line connect   | ion on the   | back of a 500 bbl.   | tank   |  | lour of Occurrence   |   |   | Hour of Discovery   |
| Was Immedi  | ata Notice (   | Given?   |  |  |  | If YES, To   | Whom?  | 6/  | /14/10 8  | 8:56 a.m.   |
| was immedi  | ate Notice (   |  | Yes 🗆  | No Not Re  | quired   |  | OCD on call ope  | rator   |   |   |
| By Whom?  | Tony Savoie  |  |  |  |  |  | lour 6/14/10 9:24  |   |   |   |
| Was a Water   | course Read  | ched?  | Yes 🛛  | No   |  |  | olume Impacting t  |   | ourse.  |   |
|   |  |  |  | I Taken.* The dra<br>I, inspected and re   |  |  |  |   |   | nternal corrosion, the remaining internally.  |
|   |  | and Classics   | Action Tak   |  | C . 1 C  |  |  |   |   |   |
| inside the co   | ntainment a  | ee standing flu<br>rea will be sa  | uids were r<br>mpled to de   | emoved. The heave<br>etermine vertical e   | rily satu<br>extent; a   | rated soil is i<br>remediation   | n the process of b<br>plan along with a  | eing remov  | ved and   | e the earthen containment<br>placed on plastic. The area<br>plan will be submitted.   |
| nside the co<br>The Site rem hereby cert regulations a public health should their or the enviro   | ntainment a<br>ediation for<br>ify that the<br>Il operators<br>or the envi<br>operations h<br>nment. In a  | ee standing flor<br>rea will be sare<br>the crude oil<br>information g<br>are required to<br>ronment. The<br>nave failed to  | uids were r<br>mpled to do<br>spill will f<br>iven above<br>to report and<br>acceptance<br>adequately<br>OCD accep | emoved. The heave<br>etermine vertical collow the NMOCI<br>is true and completed of a C-141 reposition of a C-141 re | extent; a<br>D guidel<br>ete to the<br>elease no<br>rt by the<br>emediate                          | rated soil is in remediation lines for leak the best of my otifications are NMOCD me contaminations.   | n the process of beginning along with a sand spills.  knowledge and und perform correcarked as "Final Roon that pose a thr   | nderstand to<br>etive actions<br>eport" does  | that purs<br>s for relised not re | placed on plastic. The area<br>plan will be submitted.<br>suant to NMOCD rules and<br>eases which may endanger<br>ieve the operator of liability  |
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| inside the co<br>The Site rem<br>I hereby cert<br>regulations a<br>public health<br>should their of<br>or the enviro  | ntainment a<br>ediation for<br>ify that the<br>Il operators<br>or the envi<br>operations h<br>nment. In a  | rea will be say the crude oil information gare required to ronment. The lave failed to iddition, NMC was and/or reg  | uids were r<br>mpled to do<br>spill will f<br>iven above<br>to report and<br>acceptance<br>adequately<br>OCD accep | emoved. The heave<br>etermine vertical collow the NMOCI<br>is true and completed of a C-141 reposition of a C-141 re | rily satu<br>extent; a<br>D guidel<br>ete to the<br>elease nort<br>by the<br>emediate<br>report do | rated soil is in remediation lines for leak to best of my otifications are NMOCD meteorated to some contaminations not relieve   | n the process of beginning along with a sand spills.  knowledge and und perform correct arked as "Final R on that pose a three the operator of OIL CON"  | new containderstand to tive actions eport" does reat to groun responsibil                                 | that purs<br>s for relis not relind water<br>lity for c   | placed on plastic. The area<br>plan will be submitted.<br>suant to NMOCD rules and<br>eases which may endanger<br>ieve the operator of liability<br>r, surface water, human healt<br>ompliance with any other |
| nside the co The Site rem hereby cert regulations a public health should their or the enviro federal, state Signature:  | ntainment a ediation for ify that the II operators or the envioperations homent. In a coloral law  | ee standing flore will be say the crude oil information go are required to ronment. The lave failed to iddition, NMC wis and/or regional control of the cont | uids were r<br>mpled to do<br>spill will f<br>iven above<br>to report and<br>acceptance<br>adequately<br>OCD accep | emoved. The heave<br>etermine vertical collow the NMOCI<br>is true and completed of a C-141 reposition of a C-141 re | rily satu<br>extent; a<br>D guidel<br>ete to the<br>elease nort<br>by the<br>emediate<br>report do | rated soil is in remediation lines for leak to best of my otifications are NMOCD meteorated to some contaminations not relieve   | n the process of beginning along with a sand spills.  knowledge and und perform correct arked as "Final Roon that pose a three the operator of   | neing remove a new containderstand to titive actions eport" does eat to groun responsibil                 | that purs<br>s for relis not relind water<br>lity for c   | placed on plastic. The area<br>plan will be submitted.<br>suant to NMOCD rules and<br>eases which may endanger<br>ieve the operator of liability<br>r, surface water, human healt<br>ompliance with any other |
| Inside the co<br>The Site rem<br>I hereby cert<br>regulations a<br>public health<br>should their or<br>federal, state<br>Signature:                                       | ntainment a ediation for ify that the II operators or the environment. In a color of the color o | ee standing flore will be say the crude oil information go are required to ronment. The lave failed to iddition, NMC wis and/or regional control of the cont | uids were r mpled to de spill will fe iven above to report an e acceptance adequately OCD accep ulations.          | emoved. The heave<br>etermine vertical collow the NMOCI<br>is true and completed of a C-141 reposition of a C-141 re | rily saturextent; a D guidel ete to the elease nort by the emediate report do                      | rated soil is in remediation lines for leak to best of my otifications are NMOCD meteorated to some contaminations not relieve   | n the process of beginning along with a seand spills.  knowledge and use a series of the plan along with a seand spills.  knowledge and use and perform correct arked as "Final Report that pose a three the operator of the operator of the operator of the operator of the performance of the operator of th | new containderstand to tive actions eport" does reat to groun responsibil                                 | that purs<br>s for relis not relind water<br>lity for c   | placed on plastic. The area plan will be submitted.  suant to NMOCD rules and eases which may endanger ieve the operator of liability r, surface water, human healt ompliance with any other  DIVISION        |
| inside the co The Site rem I hereby cert regulations a public health should their or the enviro federal, state  Signature:  Printed Name  Title: Waste                    | ntainment a ediation for ify that the ll operators or the environment. In a condition of the condition of the environment. In a condition of the environment of t | ee standing flater will be sate the crude oil information gare required to ronment. The lave failed to iddition, NMC was and/or regionie   | uids were r mpled to de spill will fe iven above to report an e acceptance adequately DCD accep ulations.          | emoved. The heave<br>etermine vertical collow the NMOCI<br>is true and completed of a C-141 reposition of a C-141 re | rily saturextent; a D guidel ete to the elease nort by the emediate eport do                       | rated soil is it remediation lines for leak ne best of my otifications at NMOCD me contaminations not relieve Approved by Approved by Conditions of  | n the process of beginning along with a seand spills.  knowledge and und perform correct arked as "Final Roon that pose a three the operator of OIL CON District Supervis Signed By te: 3/3/1/16  Approval:  | new containderstand to tive actions eport" does reat to groun responsibil                                 | that pursus for religions for religions for control water ity for     | placed on plastic. The area plan will be submitted.  suant to NMOCD rules and eases which may endanger leve the operator of liability r, surface water, human health ompliance with any other  DIVISION       |
| inside the co The Site rem I hereby cert regulations a public health should their or or the enviro federal, state  Printed Name Fitle: Waste  E-mail Addre  Date: 6/22/10 | ntainment a ediation for ify that the II operators or the environment. In a control of the contr | ee standing flater will be sate the crude oil information gare required to ronment. The tave failed to addition, NMC was and/or regionic   | uids were r mpled to de spill will fe iven above to report an e acceptance adequately OCD accep ulations.          | emoved. The heave<br>etermine vertical collow the NMOCI<br>is true and completed of a C-141 reposition of a C-141 re | rily saturextent; a D guidel ete to the elease nort by the emediate eport do                       | rated soil is in remediation lines for leak the best of my ottifications are NMOCD meteoritations of the contaminations of the contaminations of the conditions of the conditi | n the process of beginning along with a seand spills.  knowledge and use and perform correct arked as "Final Report that pose a three the operator of OIL CON District Supervises Signed By te: 3/3///   | new containderstand to tive actions eport" does reat to groun responsibil  SERVA  Or: /// Exp             | that pursus for religions of the state of th    | placed on plastic. The area plan will be submitted.  suant to NMOCD rules and eases which may endanger ieve the operator of liability r, surface water, human healt ompliance with any other  DIVISION  Date: |



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    |         |
|----------------|---------|
| District RP    | 2RP-521 |
| Facility ID    |         |
| Application ID |         |

## **Release Notification**

### **Responsible Party**

|   |   |  |  |                                | , , , , , , , , , , , , , , , , , , ,   | J  |  |
|---|---|--|--|--------------------------------|---|--|--|
| Responsible Party XTO Energy                  |   |  |  | OGRID 5380                     |   |  |  |
| Contact Name Kyle Littrell                    |   |  |  | Contact Telephone 432-221-7331 |   |  |  |
| Contact email Kyle_Littrell@xtoenergy.com     |   |  |  |                                | Incident # (assigned by OCD)            |  |  |
| Contact mail                                  | ing address   | 522 W. Mermod,                             | , Carlsbad, NM 88                                      | 8220                           |   |  |  |
|   |   |  | Location   | of R                           | elease So                               | ource  |  |
| Latitude 32.491438                            |   |  |  |                                |   | -104.008147<br>mal places)   |  |
| Site Name (                                   | Golden 8 Fed  | leral Battery #1                           |  |                                | Site Type                               | Exploration and Production   |  |
| Date Release                                  | Discovered  | 06/14/2010                                 |  |                                | API# (if app                            | plicable) 30-015-26931   |  |
|   |   | T  | T _  |                                |   |  |  |
| Unit Letter                                   | Section   | Township                                   | Range  |                                | Coun                                    | nty  |  |
| K   | 8   | 21S  | 29E  | Eddy                           | У                                       |  |  |
|   | Materia   |  | Nature and   | d Vol                          | lume of 1                               | justification for the volumes provided below)  |  |
| Crude Oi                                      | 1   | Volume Release                             | ed (bbls) 90   |                                |   | Volume Recovered (bbls) 80   |  |
| Produced                                      | Water   | Volume Release                             | ed (bbls)  |                                |   | Volume Recovered (bbls)  |  |
|   |   | produced water                             |  | chloride                       | e in the                                | ☐ Yes ☐ No   |  |
| Condensa                                      | ite   | Volume Release                             | ed (bbls)  |                                |   | Volume Recovered (bbls)  |  |
| Natural C                                     | ias   | Volume Release                             | ed (Mcf)   |                                |   | Volume Recovered (Mcf)   |  |
| Other (de                                     | Other (describe) Volume/Weight Released (provide units) |  |  | le units)                      | Volume/Weight Recovered (provide units) |  |  |
| Cause of Rel                                  | ease  | 1  |  |                                |   |  |  |
| site to recove<br>impacted an<br>in August of | er the free pr<br>area that had<br>2011, refere         | oduct. The spill in<br>I been cleaned up a | npacted approxim as far as practical te d2/6/2011. The | ately 90<br>in the a<br>area w | 00 sq. ft. of the                       | d out of the vessel, a vacuum truck was dispatched to the<br>the tank battery earthen containment area. The spill<br>the vessels and lines during a remediation at the facility<br>dressed, cleaned up as required, and a new closure report |  |

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-0521 |
| Facility ID    |          |
| Application ID |          |

| Was this a major              |  | nsible party consider this a major release?   |
|-------------------------------|--|---|
| release as defined by         | Volume of release is greater than 25 bbls.           |   |
| 19.15.29.7(A) NMAC?           |  |   |
| ⊠ Yes □ No                    |  |   |
|                               |  |   |
|                               |  |   |
| If YES, was immediate no      | otice given to the OCD? By whom? To w                | nom? When and by what means (phone, email, etc)?  |
|                               | acted the on-call NMOCD operator (Randy              |   |
|                               |  |   |
|                               |  |   |
|                               | Initial R  | esponse   |
| The responsible               | party must undertake the following actions immediate | ly unless they could create a safety hazard that would result in injury   |
| The source of the rele        | ease has been stopped.                               |   |
|                               | s been secured to protect human health and           | the environment.  |
|                               | _  | likes, absorbent pads, or other containment devices.  |
|                               | ecoverable materials have been removed an            | -   |
|                               | d above have <u>not</u> been undertaken, explain     | <b>U</b> 11 1 <b>V</b>  |
| N/A                           | d above have <u>not</u> been undertaken, explain     | wny:  |
|                               |  |   |
|                               |  |   |
|                               |  |   |
|                               |  |   |
|                               |  |   |
|                               |  | emediation immediately after discovery of a release. If remediation   |
|                               |  | efforts have been successfully completed or if the release occurred blease attach all information needed for closure evaluation.                  |
|                               |  |   |
|                               |  | best of my knowledge and understand that pursuant to OCD rules and fications and perform corrective actions for releases which may endanger       |
| public health or the environr | ment. The acceptance of a C-141 report by the        | OCD does not relieve the operator of liability should their operations have   |
|                               |  | eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws |
| and/or regulations.           | 1 a C-141 report does not reneve the operator of     | responsibility for compliance with any other federal, state, or focal laws  |
| D' ( IN IV                    | 1.1% 11  | T'A GHOEG   |
| Printed Name:Ky               | le Littrell  | Title:SH&E Supervisor   |
| Signature:                    |  | Date:12/31/2019   |
| email:Kyle_Littrel            | 1@xtoenergy.com                                      | Telephone:432-221-7331  |
| -                             |  |   |
|                               |  |   |
| OCD Only                      |  |   |
| Received by:                  |  | Date:   |
|                               |  |   |

# State of New Mexico Oil Conservation Division

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-0521 |
| 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?   | <u>&gt;100</u> (ft bgs) |  |  |  |
|---|-------------------------|--|--|--|
| Did this release impact groundwater or surface water?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | ☐ Yes ⊠ 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)?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | ☐ Yes ⊠ 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? | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a wetland?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying a subsurface mine?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within a 100-year floodplain?  | ☐ Yes ⊠ No              |  |  |  |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?  | ⊠ Yes □ No              |  |  |  |
| Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil   |                         |  |  |  |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soi 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.                          |
|---|
| Characterization report Cheerings.  |
|   |
| 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 ½-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.

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-0521 |
| Facility ID    |          |
| Application ID |          |

| I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the C failed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations. | fications and perform corrective actions for releases which may endanger DCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In |
|---|---|
| Printed Name:Kyle Littrell  | Title:SH&E Supervisor   |
| Signature:  | Date:12/31/2019   |
| email:Kyle_Littrell@xtoenergy.com   | Telephone:432-221-7331  |
|   |   |
| OCD Only  |   |
| Received by:  | Date:   |

### State of New Mexico Oil Conservation Division

| Incident ID    | NKMW1035646177 |
|----------------|----------------|
| District RP    | 2RP-0521       |
| Facility ID    |                |
| Application ID |                |

## **Remediation Plan**

| Remediation Plan Checklist: Each of the following items must b   | e included in the plan.  |  |  |  |
|--|--|--|--|--|
| <ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation points</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>□ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>  |  |  |  |  |
| Deferral Requests Only: Each of the following items must be con-   | nfirmed as part of any request for deferral of remediation.        |  |  |  |
| ○ Contamination must be in areas immediately under or around p deconstruction.   | roduction equipment where remediation could cause a major facility |  |  |  |
| Extents of contamination must be fully delineated.   |  |  |  |  |
| ☐ Contamination does not cause an imminent risk to human healt   | h, 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:Kyle Littrell   | Title:SH&E Supervisor  |  |  |  |
| Signature:   | Date:12/31/2019  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com  | Telephone:432-221-7331   |  |  |  |
| OCD Only   |  |  |  |  |
| Received by:   | Date:  |  |  |  |
| Approved   | Approval Denied Deferral Approved                                  |  |  |  |
| Signature: Bradford Billings   | Date: 02/01/2021   |  |  |  |

Deferral APPROVED as per Guidelines in Rule 29, for now and future response.

Form C-141

side of form

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410

### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division

Revised October 10, 2003 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back

1220 South St. Francis Dr. District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505

| 10-015-0  | 26931  |   | Rele  | ease Notific  | ation  | and Co                                 | rrective A   | ction   |  |  |   |                          |
|---|--|---|---|---|--|--|--|---|--|--|---|--------------------------|
| 1KmW /106629393   |  |   |   |   |  |  |  | nal Repor   |  |  |   |                          |
| Name of Company BOPCO, L.P. 260737                              |  |   |   |   | C  | Contact Tony Savoie                    |  |   |  |  |   |                          |
| Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220           |  |   |   |   |  |  | No. 432-556-87   | 30  |  |  |   |                          |
| Facility Name: Golden 8 Federal Battery #1                      |  |   |   |   |  | acility Typ                            |  |   |  |  |   |                          |
| Surface Ow  | ner Federa   | ıl  |   | Mineral O   | wner Fe  | deral                                  |  |   | Lease N  | No.  |   |                          |
|   |  |   |   | LOCA  | TION   | OF RE                                  | LEASE  |   |  |  |   |                          |
| Unit Letter<br>K  | Section<br>8   | Township 21S                                      | Range<br>29E                                      | Feet from the   | North/S  |  |  | East/W  | Vest Line  | County<br>Eddy   |   |                          |
|   | 1  |   | 1   | Latitude_N 32.4   |  |  |  | 223   |  |  |   |                          |
|   |  |   |   | NAT   | URE (  | OF REL                                 |  |   |  |  | 200   |                          |
| Type of Rele  | ase: Crude   | Oil .   |   |   |  | Crude oil                              | Release: 310 Bb  | IS  | Volume F   | Recovered: 2   | 290   |                          |
| Source of Re  | lease: 500 b   | obl tank overfl                                   | ow  |   |  |  | Hour of Occurrence   | ce  | Date and   | Hour of Dis  | scovery   |                          |
|   |  |   |   |   |  |  | ur not known   |   | 2/16/11 1  |  |   |                          |
| Was Immedi  | ate Notice (   |   | Yes [   | No □ Not Re   | equired  | If YES, To                             | Whom? NMOC   | D emerg   | ency repor   | ting. Left m   | essage with   | details.                 |
| By Whom?  | Tony Savoi   | e   |   |   |  |  | Hour 2/16/11 1:30  |   |  |  |   |                          |
| Was a Water   | course Read  |   | 5   | 3   |  | If YES, V                              | olume Impacting  | the Wate  | rcourse.   | ECEI<br>MAR 02   | IED   | 1                        |
|   |  | L   | Yes 🛭   | ☑ No  |  |  |  |   | TRI  | =CFI   | VED   | 1                        |
| was repaired<br>Describe Are<br>pasture land                    | and put bac<br>a Affected<br>outside the                   | and Cleanup a<br>containment r                    | Action Ta   | on Taken.* A 500 b<br>ken.*An area insid<br>approximately 400   | le the ear<br>0 sq. ft. 7  | then tank co                           | ontainment measu<br>side the containm  | ring app  | roximately<br>been affect                                | 14,100 sq.<br>ed by a prev                                   | The heater-<br>ft. and an a<br>vious flow !               | rea of<br>ine spill      |
| of crude oil v<br>The Site rem                                  | was recovered  | ed from inside<br>the crude oil                   | the conta<br>spill will                           | turated soil outside<br>ainment. The area i<br>follow the NMOC  | inside the<br>D guidel   | containme<br>ines for leak             | nt was covered w<br>s and spills.  | ith soil to                                       | o absorb sn  | nall areas of  | f free produ  | ct.                      |
| regulations a<br>public health<br>should their<br>or the enviro | If operators<br>or the envi<br>operations h<br>nment. In a | are required to<br>ronment. The<br>nave failed to | o report a<br>acceptan<br>adequately<br>OCD accep | e is true and completed in the certain received of a C-141 report | elease no<br>ort by the<br>emediate                                | tifications a<br>NMOCD m<br>contaminat | nd perform correct<br>parked as "Final Ration that pose a thing<br>the the operator of | ctive acti<br>Report" d<br>reat to gr<br>responsi | ons for rel<br>oes not rel<br>ound water<br>bility for c | eases which<br>ieve the ope<br>r, surface we<br>compliance v | may endar<br>rator of liab<br>ater, human<br>with any oth | nger<br>bility<br>health |
|   | _  |   | _   |   |  | OIL CONSERVATION DIVISION              |  |   |  |  |   |                          |
| Signature: 1 gra Damo   |  |   |   | A   | Approved by District Supervisor:                                   |  |  |   |  |  |   |                          |
| Printed Name: Tony Savoie                                       |  |   |   |   | Signed By Mily Banayer   |  |  |   |  |  |   |                          |
| Title: Waste Mgmt.& Remediation Specialist                      |  |   |   | A   | approval Da  | te: 3/7/11                             |  | Expiration  | Date:  |  |   |                          |
| E-mail Address: TASavoie@BassPet.com                            |  |   |   | c   | Conditions of Approval:  |  |  |   |  |  |   |                          |
| Date: 3/3/11 Phone:432-556-8730                                 |  |   |   | 30  | Remediation per OCD Rules &  |  |  |   |  |  |   |                          |
| Attach Additional Sheets If Necessary                           |  |   |   | ı   | Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:  2 RP. 633 |  |  |   |  |  |   |                          |

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    |          |
|----------------|----------|
| District RP    | 2RP-0633 |
| Facility ID    |          |
| Application ID |          |

## **Release Notification**

### **Responsible Party**

|  |   |   | -   |   | ,   | •  |  |  |
|--|---|---|---|---|---|--|--|--|
| Responsible Party XTO Energy   |   |   |   |   | OGRID 5380                                |  |  |  |
| Contact Name Kyle Littrell   |   |   |   |   | Contact Telephone 432-221-7331            |  |  |  |
| Contact ema  | il Kyle_Lit                             | trell@xtoenergy.c                         | om  |   | Incident # (assigned by OCD)              |  |  |  |
| Contact mail   | ing address                             | 522 W. Mermod                             | , Carlsbad, NM 8  | 8220                                    | 1   |  |  |  |
|  |   |   | Location  | of R                                    | Release S                                 | ource  |  |  |
| Latitude 32.491352 Longitude -104.008223 (NAD 83 in decimal degrees to 5 decimal places) |   |   |   |   |   |  |  |  |
| Site Name (  | Golden 8 Fed                            | leral Battery #1                          |   |   | Site Type                                 | Exploration and Production   |  |  |
| Date Release   | Discovered                              | 02/16/2011                                |   |   | API# (if ap)                              | plicable) 30-015-26931   |  |  |
|  | Ī                                       |   | T   | 1                                       |   |  |  |  |
| Unit Letter  | Section                                 | Township                                  | Range   |   | Cou                                       | nty  |  |  |
| K  | 8                                       | 21S                                       | 29E   | Edd                                     | y   |  |  |  |
|  | Materia                                 |   | Nature and  | d Vo                                    | lume of 1                                 | justification for the volumes provided below)  |  |  |
| Crude Oi   |   | Volume Release                            | ed (bbls) 310   |   |   | Volume Recovered (bbls) 290  |  |  |
| Produced   | Water                                   | Volume Release                            | ed (bbls)   |   |   | Volume Recovered (bbls)  |  |  |
| Is the concentration of dissolved chloride produced water >10,000 mg/1?                  |   |   | chloride  | e in the                                | ☐ Yes ☐ No                                |  |  |  |
| Condensa   | ite                                     | Volume Release                            | ed (bbls)   |   |   | Volume Recovered (bbls)  |  |  |
| Natural Gas Volume Released (Mcf)  |   |   |   | Volume Recovered (Mcf)                  |   |  |  |  |
| Other (describe) Volume/Weight Released (provide units                                   |   |   | )   | Volume/Weight Recovered (provide units) |   |  |  |  |
| Cause of Rel   | ease                                    | 1   |   |   |   | 1  |  |  |
| inside the ear<br>measuring ap<br>reported to the  | then tank co<br>proximately<br>ne NMOCD | ontainment measur<br>v 400 sq. ft. was af | ring approximately<br>fected. The area one oil saturated so | y 14,10<br>outside<br>il outsi          | 0 sq. ft. and the containn de the contain | eater was repaired and put back into service. An area an area of pasture land outside the containment nent had been affected by a previous flow line spill inment was removed by Basin Env. Using a hydro-vac. |  |  |

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-0633 |
| Facility ID    |          |
| Application ID |          |

| Was this a major release as defined by   | If YES, for what reason(s) does the respo<br>Release volume was greater than 25 bbls. | nsible party consider this a major release?                                     |  |  |  |
|--|---|---|--|--|--|
| 19.15.29.7(A) NMAC?  | Release volume was greater than 25 bols.  |   |  |  |  |
| ⊠ Yes □ No   |   |   |  |  |  |
|  |   |   |  |  |  |
|  | otice given to the OCD? By whom? To wited the NMOCD on 2/16/2011 via telephon         | nom? When and by what means (phone, email, etc)? e (NMOCD emergency reporting). |  |  |  |
|  | Initial R   | esponse   |  |  |  |
| The responsible  | party must undertake the following actions immediate                                  | ly unless they could create a safety hazard that would result in injury         |  |  |  |
| The source of the rele   | ease has been stopped.  |   |  |  |  |
| The impacted area ha   | s been secured to protect human health and  | the environment.  |  |  |  |
| Released materials ha  | ave been contained via the use of berms or  | likes, absorbent pads, or other containment devices.                            |  |  |  |
| All free liquids and re  | ecoverable materials have been removed an   | d managed appropriately.  |  |  |  |
| If all the actions described N/A   | d above have <u>not</u> been undertaken, explain                                      | why:  |  |  |  |
| 14/11  |   |   |  |  |  |
|  |   |   |  |  |  |
|  |   |   |  |  |  |
|  |   |   |  |  |  |
| 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:Ky  | ele Littrell  | Title:SH&E Supervisor   |  |  |  |
| Signature:   |   | Date:12/31/2019   |  |  |  |
| email:Kyle_Littrel   | 1@xtoenergy.com   | Telephone:432-221-7331  |  |  |  |
|  |   |   |  |  |  |
| OCD Only   |   |   |  |  |  |
| Received by:   |   | Date:   |  |  |  |

### State of New Mexico Oil Conservation Division

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-0633 |
| 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?   | <u>&gt;100</u> (ft bgs) |  |  |  |
|---|-------------------------|--|--|--|
| Did this release impact groundwater or surface water?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | ☐ Yes ⊠ 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)?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | ☐ Yes ⊠ 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? | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a wetland?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying a subsurface mine?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within a 100-year floodplain?  | ☐ Yes ⊠ No              |  |  |  |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?  | ⊠ Yes □ 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   |
| <ul> <li>✓ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li>✓ Boring or excavation logs</li> </ul> |
| <ul> <li>☑ Boring or excavation logs</li> <li>☑ Photographs including date and GIS information</li> </ul>  |
| ☐ Photographs including date and Ol3 information ☐ Topographic/Aerial maps   |
| ☐ Topographic/Aerial maps ☐ Laboratory data including chain of custody   |
| 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.

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-0633 |
| 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:Kyle Littrell   | Title:SH&E Supervisor  |  |  |  |  |
| Signature:   | Date:12/31/2019        |  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com  | Telephone:432-221-7331 |  |  |  |  |
| OCD Only   |                        |  |  |  |  |
| Received by:   | Date:                  |  |  |  |  |

### State of New Mexico Oil Conservation Division

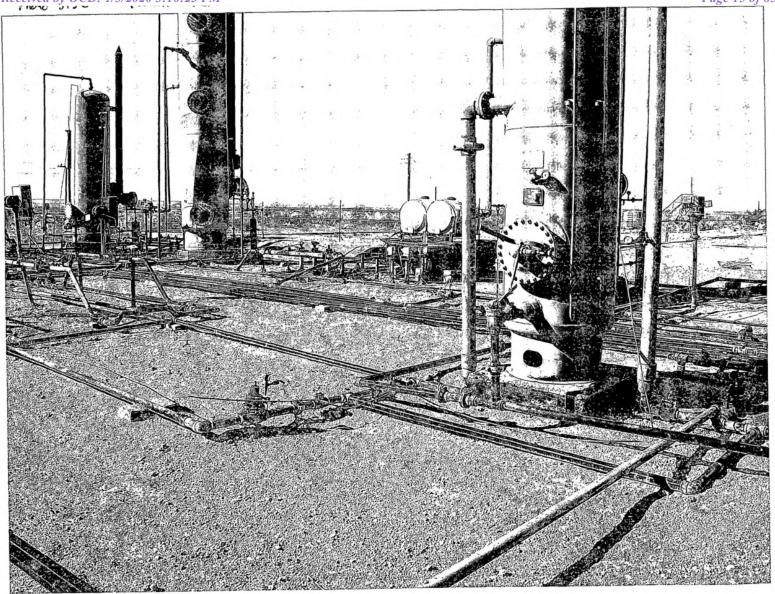
| Incident ID    | nKMW1106629393 |
|----------------|----------------|
| District RP    | 2RP-0633       |
| Facility ID    |                |
| Application ID |                |

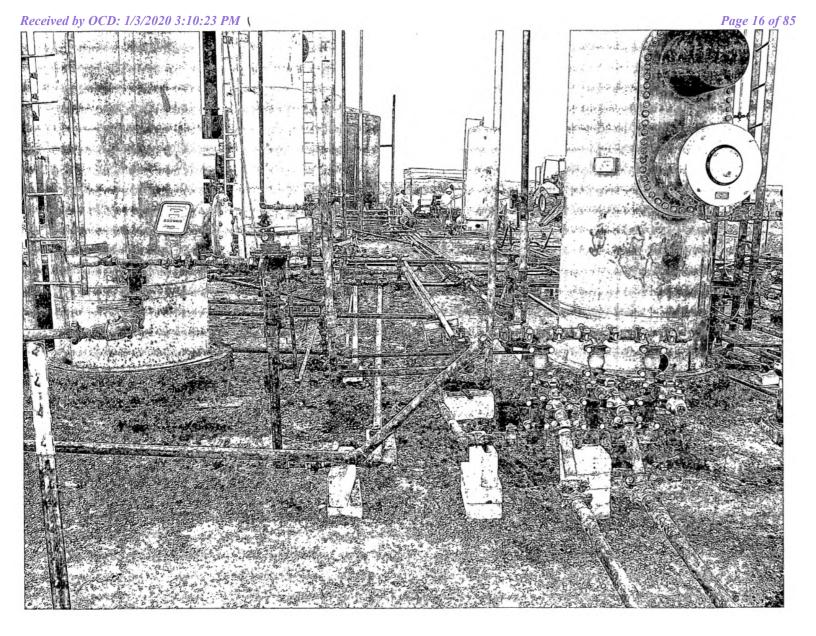
## **Remediation Plan**

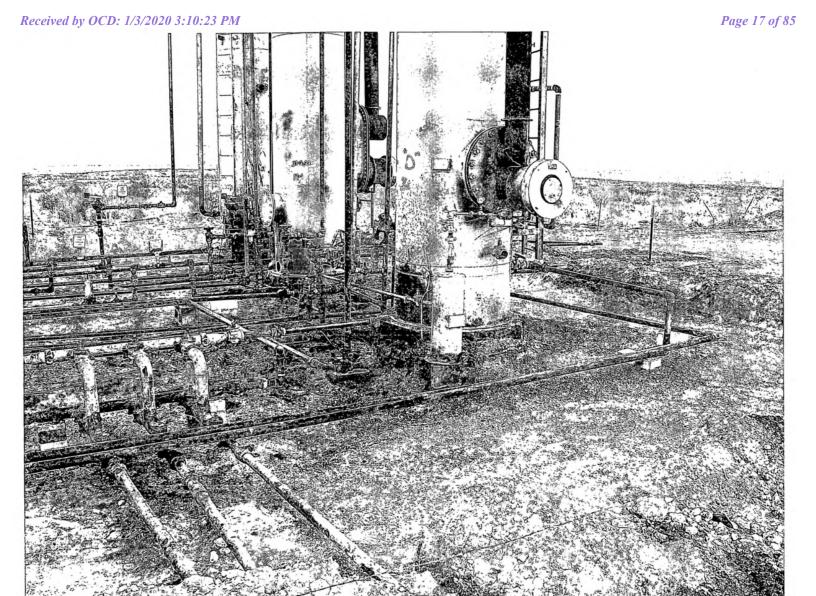
| Remediation Plan Checklist: Each of the following items must b   | e included in the plan.  |  |  |  |  |
|--|--|--|--|--|--|
| □ Detailed description of proposed remediation technique □ Scaled sitemap with GPS coordinates showing delineation points □ Estimated volume of material to be remediated □ 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 con  | nfirmed as part of any request for deferral of remediation.        |  |  |  |  |
|  | roduction equipment where remediation could cause a major facility |  |  |  |  |
|  |  |  |  |  |  |
| ○ Contamination does not cause an imminent risk to human health  | h, 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:Kyle Littrell   | Title:SH&E Supervisor  |  |  |  |  |
| Signature:   | Date:12/31/2019  |  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com  | Telephone:432-221-7331   |  |  |  |  |
| OCD Only   |  |  |  |  |  |
| <del>ood om,</del>   |  |  |  |  |  |
| Received by:   | Date:  |  |  |  |  |
| Approved   | Approval Denied Deferral Approved                                  |  |  |  |  |
| Signature: Bradford Billings   | Date: 02/01/2021   |  |  |  |  |

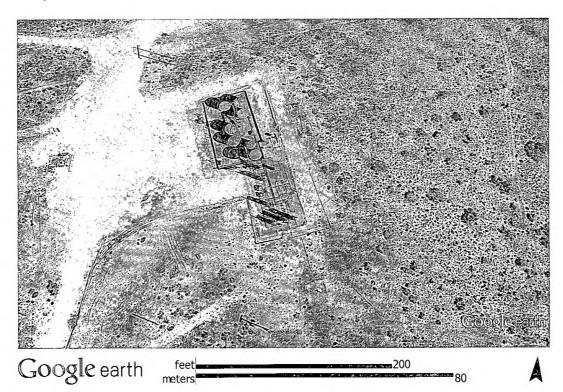
Deferred as per Rule 29 current and for future action.

| District I 1625 N. French Dr., Hobbs, NM 88240 RECEIVED State of I District II 1625 N. French Dr., Hobbs, NM 88240 RECEIVED State of I Energy Minerals a NOV 2 6 2013 Oil Conser 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87608/IOCD ARTES 20 South Santa Fe |   |  |  |  |                                  | vation Div                                   | vision   | Form C-141<br>Revised August 8, 2011<br>Submit 1 Copy to appropriate District Office in<br>accordance with 19.15.29 NMAC |   | 8, 2011<br>ffice in                           |   |                  |
|---|---|--|--|--|----------------------------------|--|--|--|---|---|---|------------------|
| 丁、  | (                                       |  |  | ease Notific   |                                  |  |  | ction  |   |   |   |                  |
| MCn   | N 133                                   | 30536  | 60   |  |                                  | OPERA'                                       | ГOR  |  | ✓ Initi                                 | al Report                                     | Final   | Report           |
|   |   | OPCO, L.P.   |  |  |                                  | Contact: To                                  | ·  |  |   |   |   |                  |
|   |   |  |  | oad, N.M. 88220  |                                  |  | No. 575-887-73   |  |   |   |   |                  |
| P&A 2011  | ne: Golde                               | n 8 Federal I                                      | sattery #  | , the Well #1 w  | as                               | racility Typ                                 | e: Exploration   | and Prodi  | uction                                  |   |   |                  |
| Surface Ow  | ner: Fede                               | ral  |  | Mineral C  | huner:                           | Federal                                      | Federal API No. 30-015-26931                               |  |   |   |   |                  |
| Surface Ow  | ner. rede                               | 141  |  |  |                                  |  | EACE   |  | AITIN                                   | 7. 50-015-2                                   | 0731  |                  |
| Unit Letter   | Section                                 | Township   | Range  | Feet from the  |                                  | OF REI                                       | Feet from the  | East/We  | est Line                                | County  |   |                  |
| K   | 8                                       | 21S  | 29E  | 1650   | South                            | South Line                                   | 2180   | West   | ost Line                                | Eddy  |   |                  |
|   |   |  |  |  |                                  |  |  |  |   |   |   |                  |
|   |   |  |  | Latitude N 32  | .49114                           | Longitude                                    | W 104.00777  | 5  |   |   |   |                  |
|   |   |  |  | NAT  | URE                              | OF REL                                       | EASE   |  |   |   |   |                  |
| Type of Rele  | ase: Crude                              | oil and produc                                     | ced water  |  |                                  | Volume of                                    | Release: 6 Bbls  |  | Volume Recovered: 3 Bbls oil and 2 Bbls |   |   |                  |
| Causa of Da   | lunca: Man                              | ter-treater fire                                   | tuba   |  |                                  |  | nd 15 Bbls water<br>lour of Occurren                       |  | water.                                  | Hour of Die                                   | covery: Date                                      |                  |
| Source of Re  | icase, rica                             | ter-treater fire                                   | tutie  |  |                                  |  | /13 Time unknow  |  |   |   | ximately 9:00                                     | a.m.             |
| Was Immedi  | ate Notice                              |  | Yes [  | No Not R   | equired                          | If YES, To                                   | Whom?  |  |   |   |   |                  |
| By Whom?  |   |  |  | •  |                                  | Date and Hour                                |  |  |   |   |   |                  |
| Was a Water   | course Rea                              |  | Yes 🗵  | 1 N-   |                                  | If YES, Vo                                   | olume Impacting  | the Water  | course.                                 |   |   |                  |
|   |   |  |  |  |                                  |  |  |  |   |   |   |                  |
| If a Watercon   | urse was In                             | npacted, Descr                                     | ibe Fully.   |  |                                  |  |  |  |   |   |   |                  |
| The fire tube free product.   | on the hea                              |  | cloped a le  | eak, the productio   | n was sv                         | vitched out o                                | f the vessel, a vac  | cuum truck   | was dis                                 | patched to th                                 | e site to recov                                   | er the           |
| The spill imp<br>practicable in   | acted appr<br>the area a                | round the vess                                     | sq. ft. of t   | the tank battery easies during a remed<br>we closure report  | diation a                        | t the facility i                             | n August of 201  | 1, reference   | e spill re                              |   |   |                  |
| regulations a<br>public health<br>should their of<br>or the environ   | or the envolutions of the incomment. In | are required to<br>ironment. The<br>have failed to | o report and<br>acceptant<br>adequately<br>OCD accep | e is true and comp<br>nd/or file certain r<br>ce of a C-141 report<br>investigate and r<br>otance of a C-141 | release nort by the<br>remediate | otifications a<br>e NMOCD m<br>e contaminati | nd perform corre<br>arked as "Final F<br>on that pose a th | ctive action<br>Report" does<br>reat to gro  | ns for rel<br>es not rel<br>und wate    | eases which<br>lieve the ope<br>r, surface wa | may endange<br>rator of liabili<br>ater, human he | r<br>ty<br>ealth |
|   | OIL CONSERVATION DIVISION               |  |  |  |                                  |  |  |  |   |   |   |                  |
| Signature! 1 any Dallin   |   |  |  |  |                                  |  |  |  |   |   |   |                  |
| Approved by Environmental Specialist:   |   |  |  |  |                                  |  |  |  |   |   |   |                  |
| Printed Name: Tony Savoie  Title: Waste Management and Remediation Specialist   |   |  |  | Approval Da  | QV 2 6 201                       |  | xpiration  |  | seminar se                              |   |   |                  |
| E-mail Addre  | ess: tasavoi                            | e@basspet.co                                       | m  |  |                                  | Conditions o                                 | f Approval:  |  |   | T   | П   |                  |
| D   |   |  | D.   | 100 555 0505   | Re                               | mediation p                                  | er OCD Rule &  | Guidelines   | ., &                                    | Attached                                      |   |                  |
| Date: Phone: 432-556-8730   like approval by BLM. SUBMIT REMEDIATION    Attach Additional Sheets If Necessary   PROPOSAL NO LATER THAN:   2789-20602-   |   |  |  |  |                                  |  |  |  |   |   |   |                  |
|   |   |  |  |  | 7                                | beer   | nber 2   | 4201   | 5                                       |   | 200   |                  |









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    |          |
|----------------|----------|
| District RP    | 2RP-2082 |
| Facility ID    |          |
| Application ID |          |

## **Release Notification**

### **Responsible Party**

|   |  |  | Kesp  | JU1151               | DIC I al i                              | y   |  |
|---|--|--|---|----------------------|---|---|--|
| Responsible Party XTO Energy                  |  |  |   | OGRID                | OGRID 5380                              |   |  |
| Contact Name Kyle Littrell                    |  |  |   |                      | Contact Telephone 432-221-7331          |   |  |
| Contact ema                                   | il Kyle_Lit                                    | trell@xtoenergy.c                          | om  |                      | Incident #                              | (assigned by OCD)   |  |
| Contact mail                                  | ing address                                    | 522 W. Mermod,                             | , Carlsbad, NM 88                                       | 3220                 |   |   |  |
|   |  |  | Location  | of R                 | elease S                                | ource   |  |
| Latitude 32.4                                 | 91141  |  | (NAD 83 in de   | cimal de             | Longitude<br>grees to 5 deci            | -104.007775<br>mal places)  |  |
| Site Name C                                   | Golden 8 Fed                                   | leral Battery #1                           |   |                      | Site Type                               | Exploration and Production  |  |
| Date Release                                  | Discovered                                     | 11/25/2013                                 |   |                      | API# (if ap)                            | plicable) 30-015-26931  |  |
| Unit Letter                                   | Section  | Township                                   | Range   |                      | Cour                                    | ntv   |  |
| K   | 8  | 21S  | 29E   | Eddy                 |   |   |  |
|   | Materia  | l(s) Released (Select al                   | Nature and  |                      |   | Release c justification for the volumes provided below)   |  |
| Crude Oi                                      |  | Volume Release                             |   |                      | •                                       | Volume Recovered (bbls) 3   |  |
| Produced                                      | Water  | Volume Release                             | ed (bbls) 15  |                      |   | Volume Recovered (bbls) 2   |  |
|   |  |  | tion of dissolved c<br>>10,000 mg/l?                    | hloride              | in the                                  | ☐ Yes ☐ No  |  |
| Condensate                                    |  | Volume Released (bbls)                     |   |                      |   | Volume Recovered (bbls)   |  |
| Natural Gas                                   |  | Volume Released (Mcf)                      |   |                      |   | Volume Recovered (Mcf)  |  |
| Other (describe) Volume/Weight Release        |  | Released (provide                          | eased (provide units)                                   |                      | Volume/Weight Recovered (provide units) |   |  |
| Cause of Rel                                  | ease   |  |   |                      |   |   |  |
| site to recove<br>impacted an<br>in August of | r the free pr<br>area that had<br>2011, refere | oduct. The spill in<br>I been cleaned up a | npacted approximates far as practical te d2/6/2011. The | ately 90<br>in the a | 00 sq. ft. of the around                | d out of the vessel, a vacuum truck was dispatched to the the tank battery earthen containment area. The spill the vessels and lines during a remediation at the facility dressed, cleaned up as required, and a new closure report |  |

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2082 |
| Facility ID    |          |
| Application ID |          |

| Was this a major release as defined by 19.15.29.7(A) NMAC?  ☐ Yes ☐ No  If YES, was immediate no N/A   | If YES, for what reason(s) does the respon N/A  otice given to the OCD? By whom? To wh | om? When and by what means (phone, email, etc)?   |  |  |  |
|--|--|---|--|--|--|
|  | Initial Ro   | esponse   |  |  |  |
| The responsible p  | party must undertake the following actions immediatel                                  | y unless they could create a safety hazard that would result in injury  |  |  |  |
| <ul> <li>☑ The source of the release has been stopped.</li> <li>☑ The impacted area has been secured to protect human health and the environment.</li> <li>☑ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.</li> <li>☑ All free liquids and recoverable materials have been removed and managed appropriately.</li> <li>If all the actions described above have not been undertaken, explain why:</li> <li>N/A</li> </ul>   |  |   |  |  |  |
| has begun, please attach a   | a narrative of actions to date. If remedial  | emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred lease 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:Ky  | Printed Name:Kyle Littrell Title:SH&E Supervisor                                       |   |  |  |  |
| Signature:   |  | Date:12/31/2019   |  |  |  |
| email:Kyle_Littrel   | 1@xtoenergy.com  | Telephone:432-221-7331  |  |  |  |
| OCD Only  Received by:   |  | Date:   |  |  |  |

### State of New Mexico Oil Conservation Division

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2082 |
| 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?   | <u>&gt;100</u> (ft bgs) |  |  |  |
|---|-------------------------|--|--|--|
| Did this release impact groundwater or surface water?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | ☐ Yes ⊠ 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)?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | ☐ Yes ⊠ 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?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a wetland?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying a subsurface mine?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within a 100-year floodplain?  | ☐ Yes ⊠ No              |  |  |  |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?  | ⊠ Yes □ 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.                          |
|---|
| Characterization report Cheerings.  |
|   |
| 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 ½-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.

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2082 |
| 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:Kyle Littrell   | Title:SH&E Supervisor  |  |  |  |  |
| Signature:   | Date:12/31/2019        |  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com  | Telephone:432-221-7331 |  |  |  |  |
| OCD Only   |                        |  |  |  |  |
| Received by:   | Date:                  |  |  |  |  |

### State of New Mexico Oil Conservation Division

| Incident ID    | nJMW1333053660 |
|----------------|----------------|
| District RP    | 2RP-2082       |
| Facility ID    |                |
| Application ID |                |

## **Remediation Plan**

| Remediation Plan Checklist: Each of the following items must be included in the plan.   |  |  |  |  |  |
|---|--|--|--|--|--|
| <ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation points</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>□ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul> |  |  |  |  |  |
| Deferral Requests Only: Each of the following items must be con   | nfirmed as part of any request for deferral of remediation.  |  |  |  |  |
| ☐ Contamination must be in areas immediately under or around predeconstruction.   | roduction equipment where remediation could cause a major facility   |  |  |  |  |
|   |  |  |  |  |  |
| ○ Contamination does not cause an imminent risk to human health   | n, the environment, or groundwater.  |  |  |  |  |
|   | e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of |  |  |  |  |
| Printed Name:Kyle Littrell  | Title:SH&E Supervisor  |  |  |  |  |
| Signature:  | Date:12/31/2019  |  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com   | Telephone:432-221-7331   |  |  |  |  |
| OCD Only  |  |  |  |  |  |
| Received by:  | Date:  |  |  |  |  |
| Approved  | Approval Denied Deferral Approved  |  |  |  |  |
| Signature: Bradford Billings  | Date: 02/01/2021   |  |  |  |  |

Deferred as per Rue 29 current use and future action on site

AUG 1 3 2014

Form C-141 Revised August 8, 2011

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> District III 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr.

State of New Mexico

Submic Cepy Enppropriate District Office in accordance with 19.15.29 NMAC.

| 1220 S. St. Fran  | icis Dr., Santa | a Fe, NM 87505                 | 5            | Sa                 | anta F         | e, NM 875                                 | 05                                    |                |              |                            |          |                         |
|---|-----------------|--------------------------------|--------------|--------------------|----------------|---|---------------------------------------|----------------|--------------|----------------------------|----------|-------------------------|
|   |                 | an all a second and a second   | Rele         | ase Notific        | catio          | n and Co                                  | rrective A                            | ction          |              |                            |          |                         |
| nABIA   | -22/13          | 37719                          |              |                    |                | OPERA'                                    | ГOR                                   |                | ✓ Initi      | al Report                  |          | Final Repor             |
| Name of Co  | ompany: B       | OPCO, L.P.                     | ó            | 340737             |                | Contact: To                               | ny Savoie                             |                |              |                            |          |                         |
|   |                 |                                | 04 Carlst    | oad, N.M. 8822     |                |   | No. 575-887-73                        | _              |              |                            |          |                         |
| Facility Na<br>P&A 2011   | me: Golde       | n 8 Federal I                  | Battery #1   | , the Well #1 w    | as             | Facility Typ                              | e: Exploration                        | and Proc       | duction      |                            |          |                         |
| Surface Ow  | ner: Feder      | al                             |              | Mineral (          | Owner:         | Federal                                   |                                       |                | API No       | . 30-015-2                 | 6931     |                         |
|   |                 |                                |              | LOCA               | ATIO           | N OF RE                                   | LEASE                                 |                |              |                            |          |                         |
| Unit Letter<br>K  | Section<br>8    | Township<br>21S                | Range<br>29E | Feet from the 1650 | North<br>South | n/South Line                              | Feet from the 2180                    | East/W<br>West | est Line     | County<br>Eddy             |          |                         |
|   |                 |                                |              | Latitude N 32      | 2.49114        | 41 Longitud                               | e_W 104.00777                         | 5              |              |                            |          |                         |
|   |                 |                                |              |                    |                | OF REL                                    |                                       |                |              |                            |          |                         |
| Type of Rele  | ease: Crude     | oil and produ                  | ced water    |                    |                | Volume of                                 | Release: 3 Bbls                       |                |              | Recovered:                 | l Bbl.   | oil and 17              |
| 0 00  |                 | 11 7                           |              |                    |                |   | nd 38 Bbls water                      |                | Bbls water   |                            |          | Dete                    |
| Source of Re  | elease: Victa   | aulic fitting or               | the produ    | ction header.      |                | Date 8/12/                                | Iour of Occurrent<br>14 Time unknow   |                |              | Hour of Dis<br>Time approx |          | y: Date<br>y 10:30 a.m. |
| Was Immed   | iate Notice (   |                                | Yes [        | No Not R           | equired        | If YES, To<br>NMOCD I                     | Whom?<br>Emergency #104               |                |              |                            |          |                         |
| By Whom?  |                 |                                |              |                    |                | Date and Hour: 8/12/14 at 12:10 p.m.      |                                       |                |              |                            |          |                         |
| Was a Water   | rcourse Rea     |                                | Yes 🗵        | l No               |                | If YES, Volume Impacting the Watercourse. |                                       |                |              |                            |          |                         |
| 10 11/  |                 |                                |              |                    |                |   | NM OIL CONSERVATION                   |                |              |                            |          |                         |
| II a Waterco  | urse was Im     | pacted, Desci                  | ibe Fully.   |                    |                |   |                                       | ART            | ESIA DIS     | TRICT                      |          |                         |
|   |                 |                                |              |                    |                |   |                                       | AL             | IG 13_       | 2014                       |          |                         |
|   |                 | lem and Reme                   |              |                    | ally one       | n valve was sl                            | nut causing pressi                    | ure to bui     | ld up and    | blow out the               | e oaske  | nt .                    |
|   |                 |                                |              | ned to normal.     | any ope        | 14110 1143 31                             | rat cadomy press                      |                | ECEIV        |                            | o guone  |                         |
|   |                 |                                |              |                    |                |   |                                       |                |              |                            |          |                         |
|   |                 | and Cleanup                    |              |                    | earthen        | containment s                             | rea. The spill im                     | nacted an      | area that    | had been cle               | eaned i  | ın as far as            |
| practicable i   | n the area ar   | round the vess                 | els and lin  | es during a reme   | diation        | at the facility                           | n August of 201                       | 1, referen     | ce 2RP-63    | 3. And the                 | same a   | re as                   |
| impacted by<br>from the pre   |                 |                                | . The area   | will be re-addres  | sed, cle       | aned up as rec                            | uired and a new                       | closure re     | port will    | be submitted               | d includ | ding data               |
| nom me pre  | vious two s     | pilis.                         |              |                    |                |   |                                       |                |              |                            |          |                         |
|   |                 |                                |              |                    |                |   | knowledge and                         |                |              |                            |          |                         |
|   |                 |                                |              |                    |                |   | nd perform corre<br>arked as "Final F |                |              |                            |          |                         |
| should their  | operations l    | nave failed to                 | adequately   | investigate and    | remedia        | ate contaminat                            | ion that pose a thi                   | reat to gro    | ound wate    | r, surface w               | ater, hi | uman health             |
|   |                 | addition, NMO<br>ws and/or reg |              | stance of a C-141  | report         | does not reliev                           | e the operator of                     | responsib      | bility for c | compliance v               | with an  | ny other                |
| rederai, state  | , or rocar ra   | s und/or reg                   |              |                    | i              | 7   | OIL CON                               | SERV           | ATION        | DIVISIO                    | ON       |                         |
| Signature:  | 1 6             | 9.00                           | ,            |                    |                |   |                                       |                |              |                            |          |                         |
|   |                 |                                |              |                    |                |   |                                       |                |              |                            |          |                         |
| Printed Name: Tony Savoie  Approved by Environmental Spatialist Signed By  Approved by Environmental Spatialist Signed By |                 |                                |              |                    |                |   |                                       |                |              |                            |          |                         |
| Title: Waste Management and Remediation Specialist  |                 |                                |              | Approval Da        | te: 8/14/14    | - E                                       | Expiration                            | Date:          | <del>}</del> |                            |          |                         |
| E-mail Addr   | ess: tasavoi    | e@basspet.co                   | m            |                    |                | Conditions o                              | f Approval:                           |                |              | Attacl                     |          |                         |
|   | D. (1919)       |                                |              |                    |                |   | ediation per C                        | OCD Rule       | e &          | Attached                   | ı Ц      |                         |
| Date:8/13/14  |                 | ets If Necess                  |              | Phone: 432-556-    | 8/30           |   | es. SUBMIT R                          |                |              |                            |          |                         |
| Attach Add  | monal Sile      | CLS II INCCCS                  | oai y        |                    |                | PROI                                      | POSAL NO LAT                          | TER THA        | N:           | 10                         | 101      | AQG.                    |

District I
1625 N. French Dr., Hobbs, NM 88240
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spills.

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    |          |
|----------------|----------|
| District RP    | 2RP-2439 |
| Facility ID    |          |
| Application ID |          |

## **Release Notification**

### **Responsible Party**

|  |  |  | Res   | POLISI                    | DIC I UI U                                      | J  |  |  |
|--|--|--|---|---------------------------|---|--|--|--|
| Responsible Party XTO Energy                           |  |  |   |                           | OGRID 5380                                      |  |  |  |
| Contact Name Kyle Littrell                             |  |  |   |                           | Contact Telephone 432-221-7331                  |  |  |  |
| Contact ema  | il Kyle_Lit                                    | trell@xtoenergy.c  | om  |                           | Incident # (assigned by OCD)                    |  |  |  |
| Contact mail   | ing address                                    | 522 W. Mermod  | , Carlsbad, NM 8  | 8220                      |   |  |  |  |
|  |  |  | Location  | of R                      | elease S  | ource  |  |  |
| Latitude 32.491141 L (NAD 83 in decimal degree)        |  |  |   |                           | Longitude -104.007775grees to 5 decimal places) |  |  |  |
| Site Name (  | Golden 8 Fed                                   | leral Battery #1   |   |                           | Site Type                                       | Exploration and Production   |  |  |
| Date Release   | Discovered                                     | 08/12/2014   |   |                           | API# (if app                                    | plicable) 30-015-26931   |  |  |
| Unit Letter  | Section  | Township   | Danca   |                           | Cour  | ntr  |  |  |
| K  | 8  | 21S  | Range 29E   | Edd                       | County  |  |  |  |
|  | Materia  | Federal Tr   | Nature and  | d Vo                      | lume of l                                       | Release c justification for the volumes provided below)  |  |  |
| Crude Oi   |  | Volume Release   | ed (bbls) 3   |                           |   | Volume Recovered (bbls) 1  |  |  |
| Produced   | Water  | Volume Release   | ed (bbls) 27  |                           |   | Volume Recovered (bbls) 17   |  |  |
|  |  | Is the concentrate produced water                                | tion of dissolved o<br>>10,000 mg/l?                          | chloride                  | e in the  | ☐ Yes ☐ No   |  |  |
| Condensa   | ite  | Volume Release   | ed (bbls)   |                           |   | Volume Recovered (bbls)  |  |  |
| Natural Gas Volume Released (Mcf)                      |  |  |   | Volume Recovered (Mcf)    |   |  |  |  |
| Other (describe) Volume/Weight Released (provide units |  |  | Volume/Weight Recovered (provide units)                       |                           |   |  |  |  |
| Cause of Rel   | ease   |  |   |                           |   |  |  |  |
| gasket. The gearthen contaduring a rem                 | asket was re<br>iinment area<br>ediation at th | eplaced and the va<br>. The spill impacte<br>ne facility in Augu | lve was returned the dan area that had stated of 2011, refere | to norm<br>d been once 2R | al. The spill<br>cleaned up as<br>P-0633 and t  | e was shut causing pressure to build up and blow out the limpacted approximately 1500 sq. ft. of the tank battery as far as practical in the area around the vessels and lines the same areas impacted by spill reference 2RP-2082. will be submitted including data from the previous two |  |  |

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2439 |
| Facility ID    |          |
| Application ID |          |

| Was this a major release as defined by   |   | nsible party consider this a major release?   |  |  |  |  |  |  |
|--|---|---|--|--|--|--|--|--|
| 19.15.29.7(A) NMAC?  | Volume of release is greater than 25 bbls   | •   |  |  |  |  |  |  |
| ⊠ Yes □ No   |   |   |  |  |  |  |  |  |
|  |   |   |  |  |  |  |  |  |
|  | If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Tony Savoie (XTO) contacted the NMOCD emergency operator #104 on 08/12/2014 at 12:10 pm. |   |  |  |  |  |  |  |
|  | Initial R   | esponse   |  |  |  |  |  |  |
| The responsible p  | party must undertake the following actions immediate  | ly unless they could create a safety hazard that would result in injury   |  |  |  |  |  |  |
| ☐ The source of the rele   | ease has been stopped.  |   |  |  |  |  |  |  |
|  | s been secured to protect human health and  | the environment.  |  |  |  |  |  |  |
| Released materials ha  | we been contained via the use of berms or   | dikes, absorbent pads, or other containment devices.  |  |  |  |  |  |  |
| All free liquids and re  | ecoverable materials have been removed ar   | nd managed appropriately.   |  |  |  |  |  |  |
| N/A  | l above have <u>not</u> been undertaken, explain  |   |  |  |  |  |  |  |
| has begun, please attach   | a narrative of actions to date. If remedial   | remediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred 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:Ky  | le Littrell   | Title:SH&E Supervisor   |  |  |  |  |  |  |
| Signature:   |   | Date:12/31/2019   |  |  |  |  |  |  |
| email:Kyle_Littrel   | 1@xtoenergy.com   | Telephone:432-221-7331  |  |  |  |  |  |  |
| OCD Only   |   |   |  |  |  |  |  |  |
| Received by:   |   | Date:   |  |  |  |  |  |  |

### State of New Mexico Oil Conservation Division

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2439 |
| 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?   | <u>&gt;100</u> (ft bgs) |  |  |  |
|---|-------------------------|--|--|--|
| Did this release impact groundwater or surface water?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | ☐ Yes ⊠ 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)?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | ☐ Yes ⊠ 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? | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within 300 feet of a wetland?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying a subsurface mine?   | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | ☐ Yes ⊠ No              |  |  |  |
| Are the lateral extents of the release within a 100-year floodplain?  | ☐ Yes ⊠ No              |  |  |  |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?  | ⊠ Yes □ No              |  |  |  |
| Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil   |                         |  |  |  |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soi 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 ½-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.

| Incident ID    |          |
|----------------|----------|
| District RP    | 2RP-2439 |
| 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:Kyle Littrell   | Title:SH&E Supervisor  |  |  |  |  |
| Signature:   | Date:12/31/2019        |  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com  | Telephone:432-221-7331 |  |  |  |  |
|  |                        |  |  |  |  |
| OCD Only   |                        |  |  |  |  |
| Received by:   | Date:                  |  |  |  |  |

### State of New Mexico Oil Conservation Division

| Incident ID    | nAB1422637219 |
|----------------|---------------|
| District RP    | 2RP-2439      |
| 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 point ☐ Estimated volume of material to be remediated ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.1 ☐ Proposed schedule for remediation (note if remediation plan times)  | 2(C)(4) NMAC  |  |  |  |  |
| <u>Deferral Requests Only</u> : Each of the following items must be con  | firmed as part of any request for deferral of remediation.        |  |  |  |  |
| ☐ Contamination must be in areas immediately under or around predeconstruction.  | oduction equipment where remediation could cause a major facility |  |  |  |  |
| 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:Kyle Littrell   | Title:SH&E Supervisor   |  |  |  |  |
| Signature:   | Date:12/31/2019   |  |  |  |  |
| email:Kyle_Littrell@xtoenergy.com  | Telephone:432-221-7331  |  |  |  |  |
| OCD Only   |   |  |  |  |  |
| Received by:   | Date:   |  |  |  |  |
| ☐ Approved ☐ Approved with Attached Conditions of  | Approval Denied X Deferral Approved                               |  |  |  |  |
| Signature: Bradford Billings   | Date: 02/01/2021  |  |  |  |  |

Deferred as per Rule 29 current and for furute activity



LT Environmental, Inc.

3300 North "A" Street Building 1, Unit 222 Midland, Texas 79705 432.704.5178

January 2, 2020

Mr. Mike Bratcher New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Deferral Request – Addendum to Original Closure Request

Golden 8 Federal Battery #1

Remediation Permit Numbers 2RP-521, 2RP-633, 2RP-2082, and 2RP-2439

**Eddy County, New Mexico** 

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request as an addendum to a previously submitted Closure Request detailing site assessment and soil sampling activities at the Golden 8 Federal Battery #1 (Site) in Unit K, Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The original Closure Request addressed seven historical releases that occurred at the same well pad location. The New Mexico Oil Conservation Division (NMOCD) approved closure of three of the historical releases, but requested additional information for deferral consideration of four releases that occurred around production equipment. The purpose of the site assessment and soil sampling activities documented in this report was to delineate previously identified impacted soil associated with those four historical releases. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request, requesting deferral of final remediation for these release events.

#### **RELEASE BACKGROUND**

#### 2RP-521

On June 14, 2010 a drain line connection on a tank failed due to internal corrosion releasing 90 barrels (bbls) of crude oil into the lined earthen tank battery containment. The remaining oil in the tank was removed, the tank was cleaned, inspected and repaired. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 80 bbls of crude oil were recovered. The heavily saturated soils were removed. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on June 22, 2010, and the NMOCD subsequently issued RP Number 2RP-521.





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### 2RP-633

On February 12, 2011 a heater-treater malfunction caused an oil product tank to overflow releasing 310 bbls of crude oil to the lined earthen containment and pasture outside the containment. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 290 bbls of crude oil were recovered.

#### 2RP-2082

On November 25, 2013 a fire tube on the heater-treater developed a leak resulting in a release of 6 bbls of crude oil and 15 bbls of produced water to the lined earthen containment. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 3 bbls of crude oil and 2 bbls of produced water were recovered.

#### 2RP-2439

On August 12, 2014 a Victaulic gasket failed on the production header due to a blow out on the gasket resulting in a release of 3 bbls of crude oil and 38 bbls of produced water. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 1 bbl of crude oil and 17 bbls of water were recovered. The gasket was replaced.

XTO submitted a Closure Request dated May 25, 2018, for this site addressing seven separate historical releases. The NMOCD approved closure of 2RP-3612, 2RP-4017, and 2RP-4601 via email dated June 6, 2018. In consideration of the other historical releases, which were inside the tank battery, NMOCD responded with a recommendation to attempt a delineation, remediate as much as possible, and defer anything left until final plugging and abandonment.

#### SITE CLOSURE STANDARDS

The original site work and subsequent sampling occurred prior to promulgation of new spill response requirements listed in Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). As described and approved in the original Closure Request, closure standards were established as follows: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region at the time of sampling and previous reporting, LTE applied a site-specific chloride action level of 600 mg/kg.

#### SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On June 7, 2018 LTE evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected six preliminary soil samples (SS06-SS11) within the lined earthen containment. Soil from the soil sample location was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID)



Bratcher, M. Page 3

and Hach® chloride QuanTab® test strips, respectively. The preliminary soil sample locations are depicted on Figure 2. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Based on laboratory analytical results for chloride in preliminary soil sample SS09, additional vertical delineation was conducted at that location.

On June 13, 2018 LTE personnel advanced a borehole via hand-auger at one location within the lined tank battery containment on the northeastern side of the caliche well pad. The borehole was advanced at SS09 to delineate the impacted soils. Three soil samples were collected at depths ranging from 7 feet and 12.5 feet bgs (BH01A through BH01C). Soil from the soil sample location was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each sample were documented on a lithologic/soil sampling log and are included as Attachment 1. The borehole was backfilled with the soil removed and LTE personnel repaired the liner. The borehole and vertical delineation soil sample location is depicted on Figure 2.

#### **ANALYTICAL RESULTS**

Laboratory analytical results for delineation soil samples SS09 and BH01A, collected at depths ranging from 0.5 feet to 7 feet bgs, indicated that chloride concentrations exceeded 600 mg/kg. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the documented closure standards in all other soil samples. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

#### **DEFERRAL REQUEST**

LTE personnel advanced one borehole in the location of the SS09 in the lined earthen containment. Delineation soil samples BH01A through BH01C were collected from within the lined tank battery containment from depths ranging from 0.5 foot to 12.5 feet bgs to assess for the presence or absence of soil impacts as a result of the four releases in the lined earthen containment. Laboratory analytical results indicated that chloride concentrations exceeded the the previously documented closure standards in soil samples SS09 and BH01A, collected at





Bratcher, M. Page 4

depths ranging from 0.5 feet to 7 feet bgs. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the previously documented closure standards in soil samples SS06 through SS08, SS10, SS11 and BH01B through BH01C at depths of approximately 0.5 feet and 12.5 feet bgs, respectively.

Residual impacted soil in the area of delineation borehole BH01 was left in place under the lined containment in which active operating equipment exists. Vertical delineation was achieved at approximately 10 feet bgs. The lateral extent of impacted soil remaining in place is defined by the other samples documented in this report and the numerous samples collected outside the containment and documented in the original Closure Request. An estimated 555 cubic yards of impacted soil remains in place surrounding borehole BH01 and beneath the lined tank battery containment, assuming a maximum 10-foot depth based on soil sample BH01B collected at a depth of 10 feet bgs.

Because depth to groundwater is estimated to be greater than 200 feet bgs, there no nearby surface features, and the impacted soil exists above and beneath a liner, LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The lined containment was repaired by XTO and will restrict potential vertical migration of residual impacts. XTO requests deferral of final remediation for this release event until final reclamation of the well pad or major construction, whichever comes first. An updated Form C-141 is attached.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Ashley L. Ager

Ashley L. Ager, P.G.

Senior Geologist

Sincerely,

LT ENVIRONMENTAL, INC.

Mourissey

Tacoma Morrissey

Staff Geologist

cc:

Kyle Littrell, XTO

United States Bureau of Land Management – New Mexico

Robert Hamlet, NMOCD Victoria Venegas, NMOCD





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### Appendices:

Figure 1 Site Receptor Map

Figure 2 Delineation Soil Sample Locations

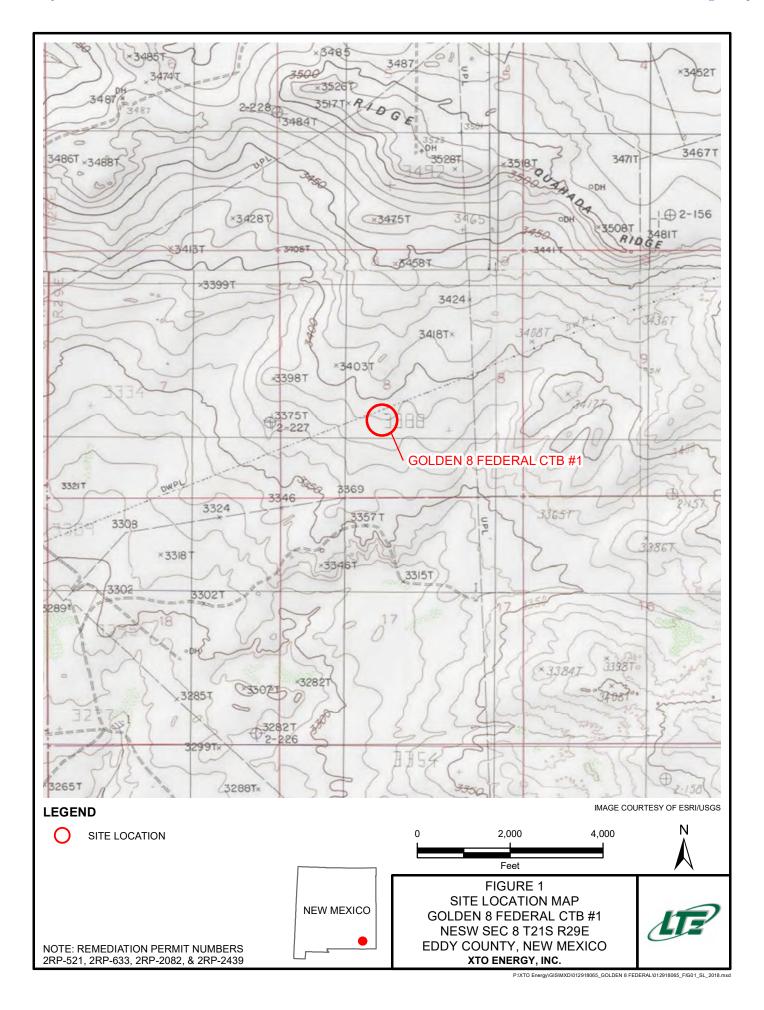
Table 1 Soil Analytical Results

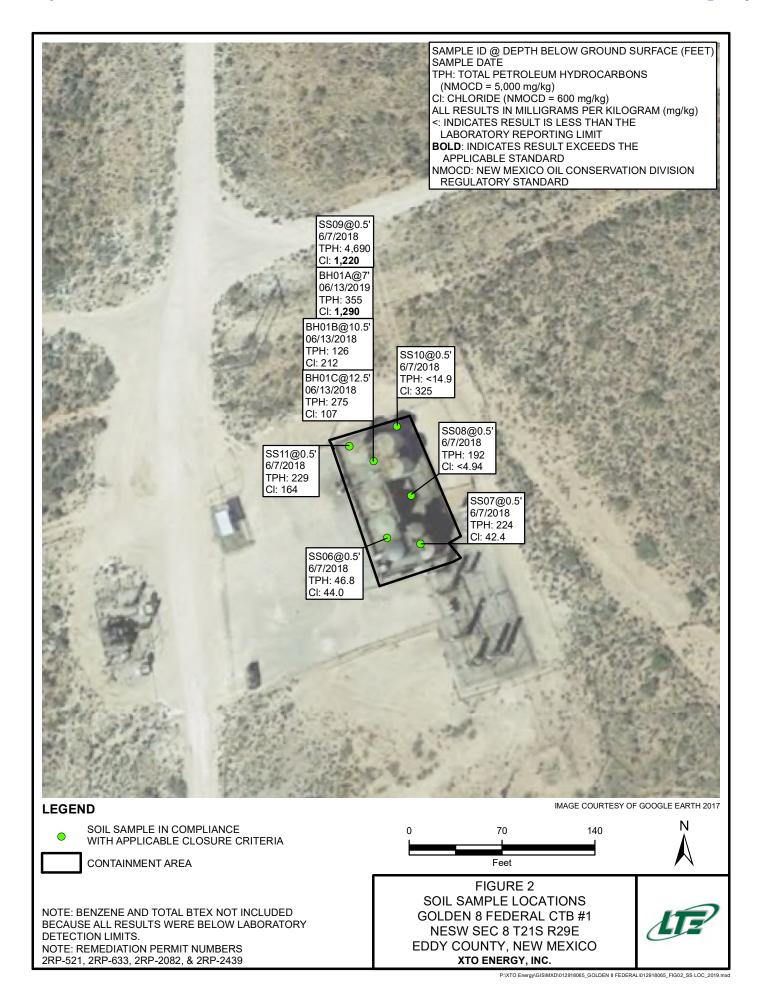
Attachment 1 Lithologic/Soil Sampling Logs

Attachment 2 Photographic Log

Attachment 3 Laboratory Analytical Reports







## TABLE 1 SOIL ANALYTICAL RESULTS

# GOLDEN 8 FEDERAL CENTRAL TANK BATTERY #1 REMEDIATION PERMIT NUMBER 2RP-521, 2RP-633, 2RP-2082, AND 2RP-2439 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

| Sample<br>Name | Sample<br>Depth<br>(feet bgs) | Sample<br>Date | Benzene<br>(mg/kg) | Toluene<br>(mg/kg) | Ethyl-<br>benzene<br>(mg/kg) | Total<br>Xylenes<br>(mg/kg) | Total<br>BTEX<br>(mg/kg) | GRO<br>(mg/kg) | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total<br>GRO+DRO<br>(mg/kg) | TPH<br>(mg/kg) | Chloride<br>(mg/kg) |
|----------------|-------------------------------|----------------|--------------------|--------------------|------------------------------|-----------------------------|--------------------------|----------------|----------------|----------------|-----------------------------|----------------|---------------------|
| NMOCD Table    | 1 Closure Crit                | eria           | 10                 | NE                 | NE                           | NE                          | 50                       | NE             | NE             | NE             | NE                          | 5,000          | 600                 |
| SS06 @ 6" bgs  | 0.5                           | 06/07/2018     | <0.00199           | <0.00199           | <0.00199                     | <0.00199                    | <0.00199                 | <15.0          | 46.8           | <15.0          | 46.8                        | 46.8           | 44.0                |
| SS07           | 0.5                           | 06/07/2018     | <0.00198           | <0.00198           | <0.00198                     | <0.00198                    | <0.00198                 | <15.0          | 203            | 21.3           | 203                         | 224            | 42.4                |
| SS08           | 0.5                           | 06/07/2018     | <0.00201           | <0.00201           | <0.00201                     | <0.00201                    | <0.00201                 | <14.9          | 172            | 20.3           | 172                         | 192            | <4.94               |
| SS09           | 0.5                           | 06/07/2018     | <0.00200           | <0.00200           | <0.00200                     | <0.00200                    | <0.00200                 | 659            | 3,900          | 129            | 4,550                       | 4,690          | 1,220               |
| SS10           | 0.5                           | 06/07/2018     | <0.00200           | <0.00200           | <0.00200                     | <0.00200                    | <0.00200                 | <14.9          | <14.9          | <14.9          | <14.9                       | <14.9          | 325                 |
| SS11           | 0.5                           | 06/07/2018     | <0.00199           | <0.00199           | <0.00199                     | <0.00199                    | <0.00199                 | <15.0          | 210            | 19.2           | 210                         | 229            | 164                 |
| BH01 A         | 7                             | 06/13/2018     | <0.00201           | <0.00201           | <0.00201                     | <0.00201                    | <0.00201                 | <15.0          | 331            | 24.0           | 331                         | 355            | 1,290               |
| BH01 B         | 10.5                          | 06/13/2018     | <0.00199           | <0.00199           | <0.00199                     | <0.00199                    | <0.00199                 | <15.0          | 126            | <15.0          | 126                         | 126            | 212                 |
| BH01 C         | 12.5                          | 06/13/2018     | <0.00200           | <0.00200           | <0.00200                     | <0.00200                    | <0.00200                 | <15.0          | 258            | 17.1           | 258                         | 275            | 107                 |

#### Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018



| LT Environm         | Papertal Inc   |                |          | L <b>T Envi</b><br>508 Wes | ronmenta<br>t Stevens | <b>al, Inc.</b><br>S Street |                   | Identifier: BH01                   | Date: 6/13/2019                          |  |  |  |
|---------------------|----------------|----------------|----------|----------------------------|-----------------------|-----------------------------|-------------------|------------------------------------|--|--|--|--|
| Advancing Op        | portunity      |                | Car      | Isbad, N                   | lew Mexi              | Street<br>co 88220          | )                 | Project Name:                      | RP Number:                               |  |  |  |
|                     | I R            |                | Compl    | iance · E                  | ngineering            | g · Remedi                  | ation             | Golden 8 Federal #1                | 2RP-521, 2RP-633, 2RP-2082, and 2RP-2439 |  |  |  |
|                     |                | LITHO          | LOGIC    | / SOII                     | SAMPI                 | LING LO                     | )G                | Logged By: L. Laumbach             | Method: Hand Auger                       |  |  |  |
| Lat/Long: 32.491438 | 2 -104.00      | Q1 <i>47</i>   |          |                            | Field Scree           | ening:                      |                   | Hole Diameter: 3"                  | Total Depth: 12.5'                       |  |  |  |
| Comments            |                | 0147           |          |                            |                       |                             |                   |                                    |  |  |  |  |
| <u> </u>            |                |                | Т        |                            |                       |                             |                   |                                    |  |  |  |  |
| Moisture<br>Content | Chloride (ppm) | Vapor<br>(ppm) | Staining | Sample #                   | Depth<br>(ft. bgs.)   | Sample<br>Depth             | Soil/Rock<br>Type | Litholo                            | gy/Remarks                               |  |  |  |
|                     |                |                |          |                            | 0                     |                             |                   |                                    |  |  |  |  |
|                     |                |                |          |                            | 1                     |                             |                   |                                    |  |  |  |  |
|                     |                |                |          |                            | 2                     |                             |                   |                                    |  |  |  |  |
|                     |                |                |          |                            | 3                     |                             |                   |                                    |  |  |  |  |
|                     | 985            | 352            |          |                            | 4                     | 4'                          | S                 | Caliche/sand light brown           | n- hydrocarbon odor detected             |  |  |  |
|                     |                |                |          |                            | 5                     |                             |                   |                                    |  |  |  |  |
|                     |                |                |          |                            | 6                     |                             |                   |                                    |  |  |  |  |
|                     |                |                |          |                            |                       |                             |                   |                                    |  |  |  |  |
|                     | 1160           | 215            |          | BH01<br>A                  | 7                     | 7'                          | S                 | sand/ o                            | clay brown                               |  |  |  |
|                     |                |                |          |                            | 8                     |                             |                   |                                    |  |  |  |  |
|                     | 462            | 95.4           |          |                            | 9                     | 9.5'                        | S                 | sand/clay brown- no stainin        | g or hydrocarbon odor detected           |  |  |  |
|                     | 156.4          | 492            |          | BH01B                      | 10                    | 10.5'                       |                   | sand/clay brown- no stainin        | ng or hydrocarbon odor detected          |  |  |  |
|                     | 50.1           | 630            |          |                            | 11                    | 11.5'                       |                   | caliche/sand- no staining          | or hydrocarbon odor detected             |  |  |  |
|                     | 65.1           | 115            |          | BH01C                      | 12                    | 12.5'                       |                   | caliche/sand- no staining or hydro | ocarbon odor detected; auguer refusal    |  |  |  |



Western view of lined tank battery containment.

| Project: 012918065 | XTO Energy, Inc.<br>Golden 8 Federal Battery #1 |                       |
|--------------------|---|-----------------------|
| March 3, 2018      | Photographic Log                                | Advancing Opportunity |



View of lined tank battery containment and liner hole during soil sampling activities.

| Project: 012918065 | XTO Energy, Inc.<br>Golden 8 Federal Battery #1 | LIE                   |
|--------------------|---|-----------------------|
| March 4, 2018      | Photographic Log                                | Advancing Opportunity |



# **Analytical Report 588640**

for

LT Environmental, Inc.

Project Manager: Adrian Baker Golden 8 Federal #1

11-JUN-18

Collected By: Client





#### 1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)





11-JUN-18

Project Manager: Adrian Baker LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: XENCO Report No(s): 588640

Golden 8 Federal #1

Project Address: NM 2RP-2439

#### Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 588640. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 588640 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

fession beamer

**Project Assistant** 

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## **Sample Cross Reference 588640**



#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

| Sample Id     | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|---------------|--------|-----------------------|--------------|---------------|
| SS06 @ 6"bgs. | S      | 06-07-18 10:00        | 6 In         | 588640-001    |
| SS07          | S      | 06-07-18 10:15        | 6 In         | 588640-002    |
| SS08          | S      | 06-07-18 10:35        | 6 In         | 588640-003    |
| SS09          | S      | 06-07-18 10:50        | 6 In         | 588640-004    |
| SS10          | S      | 06-07-18 11:00        | 6 In         | 588640-005    |
| SS11          | S      | 06-07-18 10:20        | 6 In         | 588640-006    |

# XENCO

#### CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Golden 8 Federal #1

Project ID: Report Date: 11-JUN-18
Work Order Number(s): 588640 Date Received: 06/08/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3052932 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3052970 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 588640

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal #1

TNI TRANSPORT

**Project Id:** 

Contact:

Adrian Baker

**Project Location:** NM 2RP-2439

Date Received in Lab: Fri Jun-08-18 10:09 am

Report Date: 11-JUN-18

Project Manager: Jessica Kramer

|                                   | Lab Id:    | 588640-0        | 001     | 588640-0        | 002     | 588640-0    | 003     | 588640-004 |         | 588640-005 |         | 588640-0        | 006     |
|-----------------------------------|------------|-----------------|---------|-----------------|---------|-------------|---------|------------|---------|------------|---------|-----------------|---------|
| Analysis Requested                | Field Id:  | SS06 @ 6'       | "bgs.   | SS07            | SS07    |             | SS08    |            |         | SS10       |         | SS11            |         |
| Analysis Requesieu                | Depth:     | 6- In           |         | 6- In           |         | 6- In       |         | 6- In      |         | 6- In      |         | 6- In           |         |
|                                   | Matrix:    | SOIL            | SOIL    |                 |         | SOIL        |         | SOIL       | ,       | SOIL       | ,       | SOIL            |         |
|                                   | Sampled:   | Jun-07-18 10:00 |         | Jun-07-18       | 10:15   | Jun-07-18   | 10:35   | Jun-07-18  | 10:50   | Jun-07-18  | 11:00   | Jun-07-18       | 10:20   |
| BTEX by EPA 8021B                 | Extracted: | Jun-09-18       | 07:55   | Jun-09-18 (     | 7:55    | Jun-09-18 ( | 7:55    | Jun-10-18  | 08:30   | Jun-09-18  | 07:55   | Jun-09-18 (     | 07:55   |
|                                   | Analyzed:  | Jun-10-18       | 00:43   | Jun-10-18 (     | 01:01   | Jun-10-18 ( | 1:19    | Jun-10-18  | 21:34   | Jun-10-18  | 01:55   | Jun-10-18       | 02:13   |
|                                   | Units/RL:  | mg/kg           | RL      | mg/kg           | RL      | mg/kg       | RL      | mg/kg      | RL      | mg/kg      | RL      | mg/kg           | RL      |
| Benzene                           |            | < 0.00199       | 0.00199 | < 0.00198       | 0.00198 | < 0.00201   | 0.00201 | < 0.00200  | 0.00200 | < 0.00200  | 0.00200 | < 0.00199       | 0.00199 |
| Toluene                           |            | < 0.00199       | 0.00199 | < 0.00198       | 0.00198 | < 0.00201   | 0.00201 | < 0.00200  | 0.00200 | < 0.00200  | 0.00200 | < 0.00199       | 0.00199 |
| Ethylbenzene                      |            | < 0.00199       | 0.00199 | < 0.00198       | 0.00198 | < 0.00201   | 0.00201 | < 0.00200  | 0.00200 | < 0.00200  | 0.00200 | < 0.00199       | 0.00199 |
| m,p-Xylenes                       |            | < 0.00398       | 0.00398 | < 0.00397       | 0.00397 | < 0.00402   | 0.00402 | < 0.00399  | 0.00399 | < 0.00401  | 0.00401 | < 0.00398       | 0.00398 |
| o-Xylene                          |            | < 0.00199       | 0.00199 | < 0.00198       | 0.00198 | < 0.00201   | 0.00201 | < 0.00200  | 0.00200 | < 0.00200  | 0.00200 | < 0.00199       | 0.00199 |
| Total Xylenes                     |            | < 0.00199       | 0.00199 | < 0.00198       | 0.00198 | < 0.00201   | 0.00201 | < 0.00200  | 0.00200 | < 0.00200  | 0.00200 | < 0.00199       | 0.00199 |
| Total BTEX                        |            | < 0.00199       | 0.00199 | < 0.00198       | 0.00198 | < 0.00201   | 0.00201 | < 0.00200  | 0.00200 | < 0.00200  | 0.00200 | < 0.00199       | 0.00199 |
| Inorganic Anions by EPA 300       | Extracted: | Jun-08-18 15:15 |         | Jun-08-18 15:15 |         | Jun-08-18 1 | 5:15    | Jun-08-18  | 15:15   | Jun-08-18  | 15:15   | Jun-08-18 15:15 |         |
|                                   | Analyzed:  | Jun-09-18       | 01:09   | Jun-09-18 (     | 01:15   | Jun-09-18 ( | 1:20    | Jun-09-18  | 01:26   | Jun-09-18  | 01:31   | Jun-09-18 (     | 01:47   |
|                                   | Units/RL:  | mg/kg           | RL      | mg/kg           | RL      | mg/kg       | RL      | mg/kg      | RL      | mg/kg      | RL      | mg/kg           | RL      |
| Chloride                          |            | 44.0            | 4.93    | 42.4            | 4.99    | <4.94       | 4.94    | 1220       | 24.7    | 325        | 4.96    | 164             | 4.98    |
| TPH by SW8015 Mod                 | Extracted: | Jun-08-18       | 14:00   | Jun-08-18 1     | 4:00    | Jun-08-18 1 | 4:00    | Jun-08-18  | 14:00   | Jun-08-18  | 14:00   | Jun-08-18       | 14:00   |
|                                   | Analyzed:  | Jun-09-18       | 01:03   | Jun-09-18 (     | 01:23   | Jun-09-18 ( | 1:44    | Jun-09-18  | 02:04   | Jun-09-18  | 02:25   | Jun-09-18 (     | 02:45   |
|                                   | Units/RL:  | mg/kg           | RL      | mg/kg           | RL      | mg/kg       | RL      | mg/kg      | RL      | mg/kg      | RL      | mg/kg           | RL      |
| Gasoline Range Hydrocarbons (GRO) |            | <15.0           | 15.0    | <15.0           | 15.0    | <14.9       | 14.9    | 659        | 74.8    | <14.9      | 14.9    | <15.0           | 15.0    |
| Diesel Range Organics (DRO)       |            | 46.8            | 15.0    | 203             | 15.0    | 172         | 14.9    | 3900       | 74.8    | <14.9      | 14.9    | 210             | 15.0    |
| Oil Range Hydrocarbons (ORO)      |            | <15.0           | 15.0    | 21.3            | 15.0    | 20.3        | 14.9    | 129        | 74.8    | <14.9      | 14.9    | 19.2            | 15.0    |
| Total TPH                         |            | 46.8            | 15.0    | 224             | 15.0    | 192         | 14.9    | 4690       | 74.8    | <14.9      | 14.9    | 229             | 15.0    |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS06 @ 6"bgs.

Matrix: Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-001

Date Collected: 06.07.18 10.00

Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: Analyst: OJS

SCM

% Moisture:

Date Prep:

06.08.18 15.15

Basis:

Wet Weight

Seq Number: 3052933

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 44.0   | 4.93 | mg/kg | 06.09.18 01.09 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech:

ARM

% Moisture:

Analyst: ARM

Date Prep:

06.08.18 14.00

Basis:

Wet Weight

| Parameter                         | Cas Number | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|------------|---------------|-------|--------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0      | 15.0          |       | mg/kg  | 06.09.18 01.03 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 46.8       | 15.0          |       | mg/kg  | 06.09.18 01.03 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0      | 15.0          |       | mg/kg  | 06.09.18 01.03 | U    | 1   |
| Total TPH                         | PHC635     | 46.8       | 15.0          |       | mg/kg  | 06.09.18 01.03 |      | 1   |
| Surrogate                         |            | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1-Chlorooctane                    |            | 111-85-3   | 91            | %     | 70-135 | 06.09.18 01.03 |      |     |
| o-Terphenyl                       |            | 84-15-1    | 96            | %     | 70-135 | 06.09.18 01.03 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

SS06 @ 6"bgs. Sample Id:

Soil Matrix:

Date Received:06.08.18 10.09

Lab Sample Id: 588640-001

Date Collected: 06.07.18 10.00

Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

% Moisture:

Tech: Analyst: ALJ ALJ

 $06.09.18\ 07.55$ Date Prep:

Basis:

Wet Weight

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00398  | 0.00398       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| Total BTEX           |             | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 00.43 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 104           | %     | 70-130 | 06.10.18 00.43 |      |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 99            | %     | 70-130 | 06.10.18 00.43 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS07** Sample Id:

Matrix:

Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-002

Date Collected: 06.07.18 10.15

Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P % Moisture:

Tech:

Tech:

OJS

SCMAnalyst:

Date Prep:

06.08.18 15.15

Basis:

Wet Weight

Seq Number: 3052933

| Parameter | Cas Number | Result | RL   | Units | <b>Analysis Date</b> | Flag | Dil |
|-----------|------------|--------|------|-------|----------------------|------|-----|
| Chloride  | 16887-00-6 | 42.4   | 4.99 | mg/kg | 06.09.18 01.15       |      | 1   |

Analytical Method: TPH by SW8015 Mod

ARM

ARM Analyst:

Date Prep:

06.08.18 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

| Cas Number | Result                          | RL   |  | Units  | Analysis Date  | Flag  | Dil  |
|------------|---------------------------------|--|--|--|--|---|--|
| PHC610     | <15.0                           | 15.0   |  | mg/kg  | 06.09.18 01.23   | U   | 1  |
| C10C28DRO  | 203                             | 15.0   |  | mg/kg  | 06.09.18 01.23   |   | 1  |
| PHCG2835   | 21.3                            | 15.0   |  | mg/kg  | 06.09.18 01.23   |   | 1  |
| PHC635     | 224                             | 15.0   |  | mg/kg  | 06.09.18 01.23   |   | 1  |
|            | Cas Number                      | %<br>Recovery  | Units  | Limits   | Analysis Date  | Flag  |  |
|            | 111-85-3                        | 92   | %  | 70-135   | 06.09.18 01.23   |   |  |
|            | 84-15-1                         | 95   | %  | 70-135   | 06.09.18 01.23   |   |  |
|            | PHC610<br>C10C28DRO<br>PHCG2835 | PHC610 <15.0 C10C28DRO 203 PHCG2835 21.3 PHC635 224  Cas Number 111-85-3 | PHC610 <15.0 15.0 C10C28DRO 203 15.0 PHCG2835 21.3 15.0 PHC635 224 15.0 % Cas Number 111-85-3 92 | PHC610 <15.0 15.0 C10C28DRO 203 15.0 PHCG2835 21.3 15.0 PHC635 224 15.0  Cas Number Recovery Units 111-85-3 92 % | PHC610 <15.0 15.0 mg/kg C10C28DRO 203 15.0 mg/kg PHCG2835 21.3 15.0 mg/kg PHC635 224 15.0 mg/kg  Cas Number Recovery Units Limits 111-85-3 92 % 70-135 | PHC610 <15.0 15.0 mg/kg 06.09.18 01.23 C10C28DRO 203 15.0 mg/kg 06.09.18 01.23 PHCG2835 21.3 15.0 mg/kg 06.09.18 01.23 PHC635 224 15.0 mg/kg 06.09.18 01.23  Cas Number Recovery Units Limits Analysis Date 111-85-3 92 % 70-135 06.09.18 01.23 | PHC610 <15.0 15.0 mg/kg 06.09.18 01.23 U  C10C28DRO 203 15.0 mg/kg 06.09.18 01.23  PHCG2835 21.3 15.0 mg/kg 06.09.18 01.23  PHC635 224 15.0 mg/kg 06.09.18 01.23  Cas Number Recovery Units Limits Analysis Date Flag  111-85-3 92 % 70-135 06.09.18 01.23 |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS07** Sample Id:

Seq Number: 3052932

Matrix:

Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-002

Date Collected: 06.07.18 10.15

Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B % Moisture:

Tech:

ALJ ALJ

Analyst:

Date Prep:

06.09.18 07.55

Basis:

Wet Weight

**Parameter** Cas Number Result RLUnits **Analysis Date** Flag Dil 71-43-2 Benzene < 0.00198 0.00198 06.10.18 01.01 U 1 mg/kg Toluene 108-88-3 < 0.00198 0.00198 mg/kg 06.10.18 01.01 U 1 U Ethylbenzene 100-41-4 < 0.00198 0.00198 06.10.18 01.01 mg/kg 179601-23-1 0.00397 U m,p-Xylenes < 0.00397 06.10.18 01.01 mg/kg o-Xylene 95-47-6 < 0.00198 0.00198 mg/kg 06.10.18 01.01 U Total Xylenes 1330-20-7 0.00198 06.10.18 01.01 U < 0.00198 mg/kg Total BTEX < 0.00198 0.00198 mg/kg 06.10.18 01.01

| Surrogate            | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |
|----------------------|------------|---------------|-------|--------|----------------|------|
| 4-Bromofluorobenzene | 460-00-4   | 104           | %     | 70-130 | 06.10.18 01.01 |      |
| 1,4-Difluorobenzene  | 540-36-3   | 95            | %     | 70-130 | 06.10.18 01.01 |      |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS08** Sample Id:

Matrix:

Date Received:06.08.18 10.09

Lab Sample Id: 588640-003

Date Collected: 06.07.18 10.35

Soil

Sample Depth: 6 In

Analyst:

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P % Moisture:

Tech:

OJS

SCMDate Prep: 06.08.18 15.15

Basis:

Wet Weight

Seq Number: 3052933

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <4.94  | 4.94 | mg/kg | 06.09.18 01.20 | U    | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech:

ARM

% Moisture:

ARM Analyst: Seq Number: 3052902

06.08.18 14.00 Date Prep:

Basis:

Wet Weight

| Parameter                         | Cas Number | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|------------|---------------|-------|--------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <14.9      | 14.9          |       | mg/kg  | 06.09.18 01.44 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 172        | 14.9          |       | mg/kg  | 06.09.18 01.44 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | 20.3       | 14.9          |       | mg/kg  | 06.09.18 01.44 |      | 1   |
| Total TPH                         | PHC635     | 192        | 14.9          |       | mg/kg  | 06.09.18 01.44 |      | 1   |
| Surrogate                         |            | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1-Chlorooctane                    |            | 111-85-3   | 91            | %     | 70-135 | 06.09.18 01.44 |      |     |
| o-Terphenyl                       |            | 84-15-1    | 93            | %     | 70-135 | 06.09.18 01.44 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS08** Sample Id:

Soil Matrix:

Date Received:06.08.18 10.09

Lab Sample Id: 588640-003

Date Collected: 06.07.18 10.35

Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: Analyst: ALJ ALJ

 $06.09.18\ 07.55$ Date Prep:

% Moisture:

Basis: Wet Weight

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00201  | 0.00201       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00201  | 0.00201       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00201  | 0.00201       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00402  | 0.00402       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00201  | 0.00201       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00201  | 0.00201       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| Total BTEX           |             | < 0.00201  | 0.00201       |       | mg/kg  | 06.10.18 01.19 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 97            | %     | 70-130 | 06.10.18 01.19 |      |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 110           | %     | 70-130 | 06.10.18 01.19 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS09

Matrix: Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-004

Date Collected: 06.07.18 10.50

Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P % Moisture:

Tech:

Analyst:

OJS SCM

Date Prep:

06.08.18 15.15

Basis:

Wet Weight

Seq Number: 3052933

| Parameter | Cas Number | Result | RL   | Units | <b>Analysis Date</b> | Flag | Dil |
|-----------|------------|--------|------|-------|----------------------|------|-----|
| Chloride  | 16887-00-6 | 1220   | 24.7 | mg/kg | 06.09.18 01.26       |      | 5   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech:

ARM

% Moisture:

Analyst: ARM

Date Prep: 06.08.18 14.00

Basis:

Wet Weight

| Cas Number | Result                          | RL  |  | Units  | Analysis Date   | Flag  | Dil   |
|------------|---------------------------------|---|--|--|---|---|---|
| PHC610     | 659                             | 74.8  |  | mg/kg  | 06.09.18 02.04  |   | 5   |
| C10C28DRO  | 3900                            | 74.8  |  | mg/kg  | 06.09.18 02.04  |   | 5   |
| PHCG2835   | 129                             | 74.8  |  | mg/kg  | 06.09.18 02.04  |   | 5   |
| PHC635     | 4690                            | 74.8  |  | mg/kg  | 06.09.18 02.04  |   | 5   |
|            | Cas Number                      | %<br>Recovery   | Units  | Limits   | Analysis Date   | Flag  |   |
|            | 111-85-3                        | 121   | %  | 70-135   | 06.09.18 02.04  |   |   |
|            | 84-15-1                         | 117   | %  | 70-135   | 06.09.18 02.04  |   |   |
|            | PHC610<br>C10C28DRO<br>PHCG2835 | PHC610 659 C10C28DRO 3900 PHCG2835 129 PHC635 4690  Cas Number 111-85-3 | PHC610 659 74.8 C10C28DRO 3900 74.8 PHCG2835 129 74.8 PHC635 4690 74.8  Cas Number Recovery 111-85-3 121 | PHC610 659 74.8 C10C28DRO 3900 74.8 PHCG2835 129 74.8 PHC635 4690 74.8  Cas Number Recovery Units 111-85-3 121 % | PHC610 659 74.8 mg/kg C10C28DRO 3900 74.8 mg/kg PHCG2835 129 74.8 mg/kg PHC635 4690 74.8 mg/kg Cas Number % Recovery Units Limits 111-85-3 121 % 70-135 | PHC610 659 74.8 mg/kg 06.09.18 02.04 C10C28DRO 3900 74.8 mg/kg 06.09.18 02.04 PHCG2835 129 74.8 mg/kg 06.09.18 02.04 PHC635 4690 74.8 mg/kg 06.09.18 02.04  Cas Number Recovery Units Limits Analysis Date 111-85-3 121 % 70-135 06.09.18 02.04 | PHC610 659 74.8 mg/kg 06.09.18 02.04 C10C28DRO 3900 74.8 mg/kg 06.09.18 02.04 PHCG2835 129 74.8 mg/kg 06.09.18 02.04 PHC635 4690 74.8 mg/kg 06.09.18 02.04  Cas Number Recovery Units Limits Analysis Date Flag |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS09** Sample Id:

Matrix:

Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-004

Date Collected: 06.07.18 10.50

Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

% Moisture:

Tech: Analyst: ALJ

ALJ

Seq Number: 3052970

Date Prep:

06.10.18 08.30

Basis:

Wet Weight

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00399  | 0.00399       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| Total BTEX           |             | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 21.34 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 94            | %     | 70-130 | 06.10.18 21.34 |      |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 100           | %     | 70-130 | 06.10.18 21.34 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS10** Sample Id:

Matrix:

Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-005

Seq Number: 3052933

Date Collected: 06.07.18 11.00

Sample Depth: 6 In

Prep Method: E300P

**Analysis Date** 

Analytical Method: Inorganic Anions by EPA 300

% Moisture:

Tech:

OJS

Analyst:

SCM

Date Prep:

Result

06.08.18 15.15

Basis:

Wet Weight

**Parameter** 

Cas Number Chloride 16887-00-6

RL325 4.96

06.09.18 01.31 mg/kg

Units

Flag Dil

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: Analyst: ARM ARM

Date Prep:

06.08.18 14.00

% Moisture: Basis:

Wet Weight

Flag

| Parameter                         | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <14.9  | 14.9 | mg/kg | 06.09.18 02.25 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | <14.9  | 14.9 | mg/kg | 06.09.18 02.25 | U    | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <14.9  | 14.9 | mg/kg | 06.09.18 02.25 | U    | 1   |
| Total TPH                         | PHC635     | <14.9  | 14.9 | mg/kg | 06.09.18 02.25 | U    | 1   |
|                                   |            |        | 0/   |       |                |      |     |

| Surrogate      | Cas Number | Recovery | Units | Limits | Analysis Date  |  |
|----------------|------------|----------|-------|--------|----------------|--|
| 1-Chlorooctane | 111-85-3   | 95       | %     | 70-135 | 06.09.18 02.25 |  |
| o-Terphenyl    | 84-15-1    | 98       | %     | 70-135 | 06.09.18 02.25 |  |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS10

Matrix:

Date Received:06.08.18 10.09

Lab Sample Id: 588640-005

Matrix: Soil
Date Collected: 06.07.18 11.00

Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

...

% Moisture:

Tech: Analyst: ALJ ALJ

Date Prep: 06.09.18 07.55

Basis:

Wet Weight

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00401  | 0.00401       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| Total BTEX           |             | < 0.00200  | 0.00200       |       | mg/kg  | 06.10.18 01.55 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 95            | %     | 70-130 | 06.10.18 01.55 |      |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 113           | %     | 70-130 | 06.10.18 01.55 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: **SS11** 

Seq Number: 3052933

Matrix:

Date Received:06.08.18 10.09

Lab Sample Id: 588640-006

Soil Date Collected: 06.07.18 10.20

Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

% Moisture:

Tech: Analyst: OJS SCM

Date Prep:

06.08.18 15.15

Basis:

Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 164    | 4 98 | mg/kg | 06 09 18 01 47 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech:

ARM

% Moisture:

ARM Analyst:

06.08.18 14.00 Date Prep:

Basis:

Wet Weight

| Parameter                         | Cas Number | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|------------|---------------|-------|--------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0      | 15.0          |       | mg/kg  | 06.09.18 02.45 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 210        | 15.0          |       | mg/kg  | 06.09.18 02.45 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | 19.2       | 15.0          |       | mg/kg  | 06.09.18 02.45 |      | 1   |
| Total TPH                         | PHC635     | 229        | 15.0          |       | mg/kg  | 06.09.18 02.45 |      | 1   |
| Surrogate                         |            | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1-Chlorooctane                    |            | 111-85-3   | 101           | %     | 70-135 | 06.09.18 02.45 |      |     |
| o-Terphenyl                       |            | 84-15-1    | 105           | %     | 70-135 | 06.09.18 02.45 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS11** Sample Id:

Matrix:

Soil

Date Received:06.08.18 10.09

Lab Sample Id: 588640-006

Date Collected: 06.07.18 10.20

Sample Depth: 6 In

06.10.18 02.13

70-130

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B % Moisture:

Tech:

ALJ

4-Bromofluorobenzene

ALJ Analyst: Seq Number: 3052932

Date Prep:

06.09.18 07.55

Basis:

Wet Weight

| Parameter           | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|---------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene             | 71-43-2     | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| Toluene             | 108-88-3    | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| Ethylbenzene        | 100-41-4    | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| m,p-Xylenes         | 179601-23-1 | < 0.00398  | 0.00398       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| o-Xylene            | 95-47-6     | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| Total Xylenes       | 1330-20-7   | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| Total BTEX          |             | < 0.00199  | 0.00199       |       | mg/kg  | 06.10.18 02.13 | U    | 1   |
| Surrogate           |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1,4-Difluorobenzene |             | 540-36-3   | 87            | %     | 70-130 | 06.10.18 02.13 |      |     |

460-00-4



#### **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

POL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample BKSD/LCSD Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate MS Matrix Spike MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



#### **QC Summary** 588640

#### LT Environmental, Inc.

Golden 8 Federal #1

Analytical Method: Inorganic Anions by EPA 300

3052933 Seq Number:

Matrix: Solid

Prep Method:

E300P

Date Prep: 06.08.18

LCSD Sample Id: 7656302-1-BSD

MB Sample Id:

7656302-1-BLK

LCS Sample Id: 7656302-1-BKS

%RPD RPD Limit Units

Analysis Flag

**Parameter** Chloride

MB Result Amount

47.6

325

106

LCS LCS Result %Rec

270

LCSD LCSD Result %Rec 267

Limits

Date

< 5.00 250

Spike

108

107

90-110

mg/kg

06.09.18 00:05

Analytical Method: Inorganic Anions by EPA 300

Seq Number:

3052933

Matrix: Soil

Prep Method: Date Prep:

20

E300P 06.08.18

Parent Sample Id:

588639-001

MS Sample Id: 588639-001 S

MSD Sample Id: 588639-001 SD

**Parameter** 

MS MS

MSD MSD Limits %RPD RPD Limit Units

2

Analysis

Chloride

**Parent** Result

Spike Amount Result 247 345

%Rec 120 Result %Rec 337

90-110

20

Date mg/kg 06.09.18 00:21

Flag X

Analytical Method: Inorganic Anions by EPA 300

Prep Method:

E300P

Seq Number:

3052933

Matrix: Soil

Date Prep:

06.08.18

Date

06.09.18 01:36

Parent Sample Id: **Parameter** 

588640-005

MS Sample Id: Spike

588640-005 S

Limits MSD

MSD Sample Id: 588640-005 SD %RPD RPD Limit Units

20

Analysis

Chloride

**Parent** Result

MS Result %Rec 583

MSMSD Result 104 584

%Rec 104 90-110

117

0

mg/kg

Flag

Flag

Analytical Method: TPH by SW8015 Mod Seq Number:

3052902

Amount

248

Matrix: Solid

Prep Method: Date Prep:

TX1005P

06.08.18

LCS Sample Id: 7656356-1-BKS MB Sample Id: 7656356-1-BLK

LCS LCS

108

Limits

LCSD Sample Id: 7656356-1-BSD

MB %RPD RPD Limit Units Spike LCSD LCSD Analysis **Parameter** Result Result Amount %Rec %Rec Date Result 943 06.08.18 19:37 Gasoline Range Hydrocarbons (GRO) <15.0 1000 94 954 95 70-135 20 mg/kg 06.08.18 19:37 993 99 1000 Diesel Range Organics (DRO) <15.0 100 70-135 1 20 1000

Surrogate 1-Chlorooctane

o-Terphenyl

MB %Rec 101

MB LCS Flag %Rec 122

LCS Flag

LCSD %Rec

125

107

LCSD

Flag

Limits

70-135

70-135

mg/kg Units Analysis

%

%

Date 06.08.18 19:37

06.08.18 19:37

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery

Log Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result = MS/LCS Result C = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Flag

Flag

Flag



#### **QC Summary** 588640

#### LT Environmental, Inc.

Golden 8 Federal #1

Analytical Method: TPH by SW8015 Mod

3052902

Prep Method: TX1005P Date Prep: 06.08.18

Seq Number: Matrix: Soil MS Sample Id: 588620-001 S 588620-001 Parent Sample Id:

MSD Sample Id: 588620-001 SD

| Parameter                         | Parent<br>Result | Spike<br>Amount | MS<br>Result | MS<br>%Rec | MSD<br>Result | MSD<br>%Rec | Limits | %RPD | RPD Limi | t Units | Analysis<br>Date |
|-----------------------------------|------------------|-----------------|--------------|------------|---------------|-------------|--------|------|----------|---------|------------------|
| Gasoline Range Hydrocarbons (GRO) | <15.0            | 998             | 890          | 89         | 903           | 90          | 70-135 | 1    | 20       | mg/kg   | 06.08.18 20:38   |
| Diesel Range Organics (DRO)       | <15.0            | 998             | 924          | 93         | 942           | 94          | 70-135 | 2    | 20       | mg/kg   | 06.08.18 20:38   |

| Surrogate      | MS<br>%Rec | Flag | MSD<br>%Rec | Flag | Limits | Units | Analysis<br>Date |
|----------------|------------|------|-------------|------|--------|-------|------------------|
| 1-Chlorooctane | 122        |      | 124         |      | 70-135 | %     | 06.08.18 20:38   |
| o-Terphenyl    | 107        |      | 107         |      | 70-135 | %     | 06.08.18 20:38   |
|                |            |      |             |      |        |       |                  |

Analytical Method: BTEX by EPA 8021B

3052932

Matrix: Solid

Prep Method: Date Prep: 06.09.18

SW5030B

Seq Number: MB Sample Id:

7656352-1-BLK

LCS Sample Id: 7656352-1-BKS LCSD Sample Id: 7656352-1-BSD

MB Spike LCS LCS Limits %RPD RPD Limit Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec Date Result %Rec 06.09.18 18:38 70-130 Benzene < 0.00202 0.101 0.0866 86 0.0847 85 2 35 mg/kg Toluene < 0.00202 0.101 0.0902 89 0.0897 90 70-130 1 35 mg/kg 06.09.18 18:38 Ethylbenzene < 0.00202 0.101 0.0922 91 0.0914 91 70-130 1 35 mg/kg 06.09.18 18:38 < 0.00403 0.192 95 0.187 70-130 3 35 06.09.18 18:38 m,p-Xylenes 0.202 mg/kg 06.09.18 18:38 o-Xylene < 0.00202 0.101 0.0929 92 0.0977 98 70-130 mg/kg

| Surrogate            | MB<br>%Rec | MB<br>Flag | LCS<br>%Rec | LCS<br>Flag | LCSD<br>%Rec | LCSD<br>Flag | Limits | Units | Analysis<br>Date |
|----------------------|------------|------------|-------------|-------------|--------------|--------------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 89         |            | 95          |             | 94           |              | 70-130 | %     | 06.09.18 18:38   |
| 4-Bromofluorobenzene | 93         |            | 95          |             | 99           |              | 70-130 | %     | 06.09.18 18:38   |

Analytical Method: BTEX by EPA 8021B

3052970

Matrix: Solid

Prep Method: Date Prep: SW5030B

Seq Number: MB Sample Id:

7656395-1-BLK

LCS Sample Id: 7656395-1-BKS

06.10.18 LCSD Sample Id: 7656395-1-BSD

%RPD RPD Limit Units MB Spike LCS LCS LCSD LCSD Limits Analysis **Parameter** Result Date %Rec Result Amount Result %Rec 06.10.18 19:28 Benzene < 0.00200 0.100 0.0879 88 0.0862 85 70-130 2 35 mg/kg Toluene 0.0934 93 0.0907 3 06.10.18 19:28 < 0.00200 0.100 90 70-130 35 mg/kg Ethylbenzene 0.0917 92 0.0893 3 06.10.18 19:28 < 0.00200 0.100 88 70-130 35 mg/kg 70-130 2 95 35 06.10.18 19:28 m,p-Xylenes < 0.00401 0.200 0.189 0.185 92 mg/kg 3 06.10.18 19:28 o-Xylene < 0.00200 0.100 0.0921 92 0.0897 89 70-130 35 mg/kg

| Surrogate            | MB<br>%Rec | MB<br>Flag | LCS<br>%Rec | LCS<br>Flag | LCSD<br>%Rec | LCSD<br>Flag | Limits | Units | Analysis<br>Date |
|----------------------|------------|------------|-------------|-------------|--------------|--------------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 93         |            | 99          |             | 94           |              | 70-130 | %     | 06.10.18 19:28   |
| 4-Bromofluorobenzene | 87         |            | 98          |             | 94           |              | 70-130 | %     | 06.10.18 19:28   |

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result = MS/LCS Result C

E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



#### **QC Summary** 588640

#### LT Environmental, Inc.

Golden 8 Federal #1

Analytical Method: BTEX by EPA 8021B

Prep Method:

SW5030B

Seq Number:

3052932 Matrix: Soil Date Prep:

06.09.18

Parent Sample Id:

588112-021

MS Sample Id: 588112-021 S

MSD Sample Id: 588112-021 SD

| Parameter    | Parent<br>Result | Spike<br>Amount | MS<br>Result | MS<br>%Rec | MSD<br>Result | MSD<br>%Rec | Limits | %RPD | RPD Lim | it Units | Analysis<br>Date | Flag |
|--------------|------------------|-----------------|--------------|------------|---------------|-------------|--------|------|---------|----------|------------------|------|
| Benzene      | < 0.00200        | 0.100           | 0.0473       | 47         | 0.0544        | 55          | 70-130 | 14   | 35      | mg/kg    | 06.09.18 19:16   | X    |
| Toluene      | < 0.00200        | 0.100           | 0.0502       | 50         | 0.0567        | 57          | 70-130 | 12   | 35      | mg/kg    | 06.09.18 19:16   | X    |
| Ethylbenzene | < 0.00200        | 0.100           | 0.0468       | 47         | 0.0537        | 54          | 70-130 | 14   | 35      | mg/kg    | 06.09.18 19:16   | X    |
| m,p-Xylenes  | < 0.00401        | 0.200           | 0.0968       | 48         | 0.111         | 56          | 70-130 | 14   | 35      | mg/kg    | 06.09.18 19:16   | X    |
| o-Xylene     | < 0.00200        | 0.100           | 0.0465       | 47         | 0.0653        | 66          | 70-130 | 34   | 35      | mg/kg    | 06.09.18 19:16   | X    |
|              |                  |                 |              | 1C         | MS            | мег         | MS     | р т  | imite   | Unite    | Analysis         |      |

| Surrogate            | MS<br>%Rec | MS<br>Flag | MSD<br>%Rec | MSD<br>Flag | Limits | Units | Analysis<br>Date |
|----------------------|------------|------------|-------------|-------------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 88         |            | 106         |             | 70-130 | %     | 06.09.18 19:16   |
| 4-Bromofluorobenzene | 95         |            | 104         |             | 70-130 | %     | 06.09.18 19:16   |

Analytical Method: BTEX by EPA 8021B

3052970

Matrix: Soil

Prep Method:

SW5030B

Seq Number:

588647-004

Date Prep:

Parent Sample Id:

MS Sample Id: 588647-004 S

06.10.18

MSD Sample Id: 588647-004 SD

Flag

| Parameter    | Parent<br>Result | Spike<br>Amount | MS<br>Result | MS<br>%Rec | MSD<br>Result | MSD<br>%Rec | Limits | %RPD | RPD Limit | Units | Analysis<br>Date |
|--------------|------------------|-----------------|--------------|------------|---------------|-------------|--------|------|-----------|-------|------------------|
| Benzene      | < 0.00202        | 0.101           | 0.0756       | 75         | 0.0760        | 75          | 70-130 | 1    | 35        | mg/kg | 06.10.18 20:04   |
| Toluene      | < 0.00202        | 0.101           | 0.0813       | 80         | 0.0797        | 79          | 70-130 | 2    | 35        | mg/kg | 06.10.18 20:04   |
| Ethylbenzene | < 0.00202        | 0.101           | 0.0814       | 81         | 0.0819        | 81          | 70-130 | 1    | 35        | mg/kg | 06.10.18 20:04   |
| m,p-Xylenes  | < 0.00404        | 0.202           | 0.167        | 83         | 0.171         | 85          | 70-130 | 2    | 35        | mg/kg | 06.10.18 20:04   |
| o-Xylene     | < 0.00202        | 0.101           | 0.0767       | 76         | 0.0782        | 77          | 70-130 | 2    | 35        | mg/kg | 06.10.18 20:04   |

| Surrogate            | MS<br>%Rec | MS<br>Flag | MSD<br>%Rec | MSD<br>Flag | Limits | Units | Analysis<br>Date |
|----------------------|------------|------------|-------------|-------------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 98         |            | 98          |             | 70-130 | %     | 06.10.18 20:04   |
| 4-Bromofluorobenzene | 104        |            | 106         |             | 70-130 | %     | 06.10.18 20:04   |



# CHAIN OF CUSTODY

| Stafford, Texas (281-240-4200)   | Sa  | San Antonio, Texas (210-509-3334)  | Phoenix, Arizona (480-355-0900)   | 480-355-0900)   |   |
|--|---|--|---|---|---|
| Dallas Texas (214-902-0300)  | Mic   | Midland, Texas (432-704-5251)  www.xenco.com   | Xenco Quote #   | Xenco Job#  | 7   |
|  |   |  | Analy   | Analytical Information Mat  | Matrix Codes  |
| Client / Reporting Information   |   | Project Information  |   |   |   |
| Company Name / Branch:<br>LT Environmental, Inc Permian Office   | Pro   | Project Name/Number: Golden & Federal  | )   | S = S   | W = Water<br>S = Soil/Sed/Solid                       |
| Company Address:   |   | dal  | TEX   | GW =  | GW =Ground Water DW = Drinking Water                  |
| 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705  |   | 1847 - 1778  | BI RC   | P=P   | P = Product   |
| Email:   | Phone No: Invo  | Invoice To:<br>XTO Energy - Kyle Littrell  | 1   | SL=   | SW = Surface water<br>SL = Sludge                     |
| Abaker@LTEnv.com   | (432) 704-5178  | 9  | ( on  | - WO  | OW =Ocean/Sea Water                                   |
| Project Contact: Adrian Baker  | PO  | PO Number:   | ,6  | 0=0i  | WI = Wipe   |
| Samplers's Name Unda Langler   |   |  | 202   | WW=   | WW= Waste Water                                       |
| C  |   | Collection Number of   | 1   | A = Air   | Air   |
| No. Field ID / Point of Collection   | Sample  | Date Time Matrix bottless HCI NaOH/Zn Accetate   | NaOH NAHSO4 MEOH NONE  BTEX CHIOF   | Field Comments  | nments  |
| 1 5006 60  | 2   | 1 S 00:00 8  | _   | ETB-S   |   |
| 2 5507   |   |  | XXXX  | N-873   |   |
| 3 508  |   | 10:35 8 1  | × × × ×   | W-mid TB  |   |
| 4 5509   |   | 10:50 5 1  | XXXX  | SW-mid TB   |   |
| 5 85/0   |   | 11:00 5 1  | × × × ×   | NW WTE  |   |
| 6 SS 1/1   | <b>*</b>  | 11:20 5 1  | XXXX  | SW-WTB  |   |
| 7  |   | 4  |   |   |   |
| ω  |   |  |   |   |   |
| 9  |   |  |   |   |   |
| 10   |   |  |   |   |   |
| Turnaround Time ( Business days)   |   | Data Deliverable Information   | 3   | Notes:  |   |
| Same Day TAT   | 5 Day TAT   | Level II Std QC  | Level IV (Full Data Pkg /raw data)  |   |   |
| Next Day EMERGENCY   | 7 Day TAT   | Level III Std QC+ Forms  | TRRP Level IV   |   |   |
| 2 Day EMERGENCY  | Contract TAT  | Level 3 (CLP Forms)  | UST / RG -411   |   |   |
| 3 Day EMERGENCY  |   | TRRP Checklist   |   |   |   |
| TAT Starts Day received by Lab, if received by 5:00 pm   | if received by 5:00 pm  |  |   | FED-EX / UPS: Tracking #  |   |
|  | SAMPLE CUSTODY MUST BE DOC  | SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DEI                           | IVERY   |   | 171   |
| Relinquished by Sampley  1   | Date Fine:  | 13:20  | Relinquished By:  Date Time:  Prelinquished By:  Date Time:   | 15:30   | 018118  |
| Relinquished by:   | Date Time:  | Received By:   | Custody Seal # Preserved w  | Preserved where applicable On Ice Cooler Temp. The  | Thermo. Corr. Factor                                  |
| Notice: Notice: Signature of this document and relinquis losses or expenses incurred by the Client if such loses will be enforced unless or 'y negotiated under a fu | shment of samples constitutes a valid purch<br>are due to circumstances beyond the contro<br>ally executed client contract. | ase order from client company to Xenco, its affiliates and sub<br>of Xenco. A minimum charge of \$75 will be applied to each | ocontractors. It assigns standard terms and conditions of project. Xenco's liability will be limited to the cost of sam | Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, it saffillates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and subcontractors it is a standard terms and conditions of service. Xenco will be liable only for the cost of samples and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless or "Vinegotialed under a fully executed client contract." | me any responsibility for any per sample. These terms |
| will be enforced unless p: 'y negotiated under a fu  | ally executed client contract.  |  |   |   |   |

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Final 1.000



#### XENCO Laboratories

#### Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

**Date/ Time Received:** 06/08/2018 10:09:00 AM

Work Order #: 588640

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: R8

|   | Sample Receipt Checklist |     | Comments |
|---|--------------------------|-----|----------|
| #1 *Temperature of cooler(s)?                 |                          | 4.2 |          |
| #2 *Shipping container in good condition?     |                          | Yes |          |
| #3 *Samples received on ice?                  |                          | Yes |          |
| #4 *Custody Seals intact on shipping contain  | er/ cooler?              | N/A |          |
| #5 Custody Seals intact on sample bottles?    |                          | N/A |          |
| #6*Custody Seals Signed and dated?            |                          | N/A |          |
| #7 *Chain of Custody present?                 |                          | Yes |          |
| #8 Any missing/extra samples?                 |                          | No  |          |
| #9 Chain of Custody signed when relinquished  | ed/ received?            | Yes |          |
| #10 Chain of Custody agrees with sample lal   | pels/matrix?             | Yes |          |
| #11 Container label(s) legible and intact?    |                          | Yes |          |
| #12 Samples in proper container/ bottle?      |                          | Yes |          |
| #13 Samples properly preserved?               |                          | Yes |          |
| #14 Sample container(s) intact?               |                          | Yes |          |
| #15 Sufficient sample amount for indicated to | est(s)?                  | Yes |          |
| #16 All samples received within hold time?    |                          | Yes |          |
| #17 Subcontract of sample(s)?                 |                          | N/A |          |
| #18 Water VOC samples have zero headspa       | ice?                     | N/A |          |

| Analyst: |                         | PH Device/Lot#: |                         |
|----------|-------------------------|-----------------|-------------------------|
|          | Checklist completed by: | Brianna Teel    | Date: <u>06/08/2018</u> |
|          | Checklist reviewed by:  | Jessica Warner  | Date: 06/08/2018        |

Jessica Kramer

\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

## **Analytical Report 589277**

for

LT Environmental, Inc.

Project Manager: Adrian Baker Golden 8 Federal 1

15-JUN-18

Collected By: Client





#### 1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)





15-JUN-18

Project Manager: Adrian Baker LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: XENCO Report No(s): 589277

Golden 8 Federal 1

Project Address: NM 2RP-3612

#### Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 589277. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 589277 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

fession beamer

**Project Assistant** 

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



### Sample Cross Reference 589277



#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

| Sample Id | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------------|--------------|---------------|
| BH01 A    | S      | 06-13-18 09:50        | 7 ft         | 589277-001    |
| BH01 B    | S      | 06-13-18 10:30        | 10.5 ft      | 589277-002    |
| BH01 C    | S      | 06-13-18 11:15        | 12.5 ft      | 589277-003    |

# XENCO

#### CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Golden 8 Federal 1

Project ID: Report Date: 15-JUN-18
Work Order Number(s): 589277
Date Received: 06/14/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3053586 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-

analysis.

Samples affected are: 589277-001 S.

Batch: LBA-3053603 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 589277

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal 1



Project Id:

**Contact:** 

**Project Location:** 

Adrian Baker NM 2RP-3612

**Date Received in Lab:** Thu Jun-14-18 02:00 pm

Report Date: 15-JUN-18 Project Manager: Jessica Kramer

|                                   | Lab Id:    | 589277-0  | 001              | 589277-0        | 002     | 589277-0    | 003     |   |   |  |
|-----------------------------------|------------|-----------|------------------|-----------------|---------|-------------|---------|---|---|--|
| Analysis Requested                | Field Id:  | BH01.     | A                | BH01            | В       | BH01 C      |         |   |   |  |
| Anaiysis Requested                | Depth:     | 7- ft     |                  | 10.5- ft        |         | 12.5- ft    |         |   |   |  |
|                                   | Matrix:    | SOIL      | ,                | SOIL            |         | SOIL        |         |   |   |  |
|                                   | Sampled:   | Jun-13-18 | Jun-13-18 09:50  |                 | 10:30   | Jun-13-18   | 11:15   |   |   |  |
| BTEX by EPA 8021B                 | Extracted: | Jun-14-18 | 16:00            | Jun-14-18       | 16:00   | Jun-14-18 1 | 6:00    |   |   |  |
|                                   | Analyzed:  | Jun-14-18 | 19:08            | Jun-14-18       | 19:26   | Jun-14-18 1 | 9:44    |   |   |  |
|                                   | Units/RL:  | mg/kg     | RL               | mg/kg           | RL      | mg/kg       | RL      |   |   |  |
| Benzene                           |            | < 0.00201 | 0.00201          | < 0.00199       | 0.00199 | < 0.00200   | 0.00200 |   |   |  |
| Toluene                           |            | < 0.00201 |                  |                 | 0.00199 | < 0.00200   | 0.00200 |   |   |  |
| Ethylbenzene                      |            | < 0.00201 | <0.00201 0.00201 |                 | 0.00199 | < 0.00200   | 0.00200 |   |   |  |
| m,p-Xylenes                       |            | < 0.00402 | 0.00402          | < 0.00398       | 0.00398 | < 0.00400   | 0.00400 |   |   |  |
| o-Xylene                          |            | < 0.00201 | 0.00201          | < 0.00199       | 0.00199 | < 0.00200   | 0.00200 |   |   |  |
| Total Xylenes                     |            | < 0.00201 | 0.00201          | < 0.00199       | 0.00199 | < 0.00200   | 0.00200 |   |   |  |
| Total BTEX                        |            | < 0.00201 | 0.00201          | < 0.00199       | 0.00199 | < 0.00200   | 0.00200 |   |   |  |
| Inorganic Anions by EPA 300       | Extracted: | Jun-14-18 | 14:30            | Jun-14-18 14:30 |         | Jun-14-18 1 | 4:30    |   |   |  |
|                                   | Analyzed:  | Jun-14-18 | 18:51            | Jun-14-18       | 18:56   | Jun-14-18 1 | 9:02    |   |   |  |
|                                   | Units/RL:  | mg/kg     | RL               | mg/kg           | RL      | mg/kg       | RL      |   |   |  |
| Chloride                          |            | 1290      | 24.6             | 212             | 4.94    | 107         | 5.00    |   |   |  |
| TPH by SW8015 Mod                 | Extracted: | Jun-15-18 | 12:00            | Jun-15-18       | 12:00   | Jun-15-18 1 | 2:00    |   |   |  |
|                                   | Analyzed:  | Jun-15-18 | 14:06            | Jun-15-18       | 15:06   | Jun-15-18 1 | 5:27    |   |   |  |
|                                   | Units/RL:  | mg/kg     | RL               | mg/kg           | RL      | mg/kg       | RL      |   |   |  |
| Gasoline Range Hydrocarbons (GRO) | ·          | <15.0     | 15.0             | <15.0           | 15.0    | <15.0       | 15.0    |   |   |  |
| Diesel Range Organics (DRO)       |            | 331       | 331 15.0         |                 | 15.0    | 258         | 15.0    |   |   |  |
| Oil Range Hydrocarbons (ORO)      |            | 24.0 15.0 |                  | <15.0           | 15.0    | 17.1        | 15.0    |   |   |  |
| Total TPH                         |            | 355       | 15.0             | 126             | 15.0    | 275         | 15.0    |   |   |  |
|                                   |            |           |                  |                 |         |             |         | • | * |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi







#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

BH01 A Sample Id:

Soil Matrix:

Date Received:06.14.18 14.00

Lab Sample Id: 589277-001

Date Collected: 06.13.18 09.50

Sample Depth:7 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech:

SCM

% Moisture:

Analyst:

SCM

Date Prep:

06.14.18 14.30

Basis: Wet Weight

Seq Number: 3053433

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1290   | 24.6 | mg/kg | 06.14.18 18.51 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech:

ARM

% Moisture:

JUM Analyst: Seq Number: 3053586

Date Prep: 06.15.18 12.00 Basis:

Wet Weight

| Parameter                         | Cas Number | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|------------|---------------|-------|--------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0      | 15.0          |       | mg/kg  | 06.15.18 14.06 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 331        | 15.0          |       | mg/kg  | 06.15.18 14.06 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | 24.0       | 15.0          |       | mg/kg  | 06.15.18 14.06 |      | 1   |
| Total TPH                         | PHC635     | 355        | 15.0          |       | mg/kg  | 06.15.18 14.06 |      | 1   |
| Surrogate                         |            | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1-Chlorooctane                    |            | 111-85-3   | 83            | %     | 70-135 | 06.15.18 14.06 |      |     |
| o-Terphenyl                       |            | 84-15-1    | 88            | %     | 70-135 | 06.15.18 14.06 |      |     |





#### LT Environmental, Inc., Arvada, CO

06.14.18 16.00

Golden 8 Federal 1

Sample Id: BH01 A

Matrix: Soil

Date Received:06.14.18 14.00

Lab Sample Id: 589277-001

Date Collected: 06.13.18 09.50

Sample Depth:7 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech:

ALJ

Date Prep:

% Moisture: Basis:

Wet Weight

Analyst: ALJ Seq Number: 3053603

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00201  | 0.00201       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00201  | 0.00201       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00201  | 0.00201       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00402  | 0.00402       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00201  | 0.00201       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00201  | 0.00201       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| Total BTEX           |             | < 0.00201  | 0.00201       |       | mg/kg  | 06.14.18 19.08 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 101           | %     | 70-130 | 06.14.18 19.08 |      |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 108           | %     | 70-130 | 06.14.18 19.08 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Soil

BH01 B Sample Id:

Matrix:

Date Received:06.14.18 14.00

Lab Sample Id: 589277-002

Date Collected: 06.13.18 10.30

Sample Depth: 10.5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

SCM

% Moisture:

Tech: Analyst:

SCM

06.14.18 14.30 Date Prep:

Basis:

Wet Weight

Seq Number: 3053433

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 212    | 4.94 | mg/kg | 06.14.18 18.56 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech:

ARM

% Moisture:

JUM Analyst:

Date Prep: 06.15.18 12.00 Basis:

Wet Weight

| Parameter                         | Cas Number | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|-----------------------------------|------------|------------|---------------|-------|--------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO) | PHC610     | <15.0      | 15.0          |       | mg/kg  | 06.15.18 15.06 | U    | 1   |
| Diesel Range Organics (DRO)       | C10C28DRO  | 126        | 15.0          |       | mg/kg  | 06.15.18 15.06 |      | 1   |
| Oil Range Hydrocarbons (ORO)      | PHCG2835   | <15.0      | 15.0          |       | mg/kg  | 06.15.18 15.06 | U    | 1   |
| Total TPH                         | PHC635     | 126        | 15.0          |       | mg/kg  | 06.15.18 15.06 |      | 1   |
| Surrogate                         |            | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 1-Chlorooctane                    |            | 111-85-3   | 75            | %     | 70-135 | 06.15.18 15.06 |      |     |
| o-Terphenyl                       |            | 84-15-1    | 79            | %     | 70-135 | 06.15.18 15.06 |      |     |





## LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id: BH01 B

Matrix: Soil

Date Received:06.14.18 14.00

Lab Sample Id: 589277-002

Date Collected: 06.13.18 10.30

Sample Depth: 10.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

ALJ

% Moisture:

Tech: Analyst:

ALJ

Date Prep: 06.14.18 16.00

Basis: Wet Weight

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00199  | 0.00199       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00199  | 0.00199       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00199  | 0.00199       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00398  | 0.00398       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00199  | 0.00199       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00199  | 0.00199       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| Total BTEX           |             | < 0.00199  | 0.00199       |       | mg/kg  | 06.14.18 19.26 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 93            | %     | 70-130 | 06.14.18 19.26 |      |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 101           | %     | 70-130 | 06.14.18 19.26 |      |     |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Soil

BH01 C Sample Id:

Seq Number: 3053433

Matrix:

Date Received:06.14.18 14.00

Lab Sample Id: 589277-003

Date Collected: 06.13.18 11.15

Sample Depth: 12.5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P % Moisture:

Tech: Analyst:

Parameter

Chloride

SCM

Basis:

Units

mg/kg

Wet Weight

SCM

Date Prep:

107

Result

06.14.18 14.30

RL

5.00

**Analysis Date** Flag Dil

Analytical Method: TPH by SW8015 Mod

Cas Number

16887-00-6

Prep Method: TX1005P

06.14.18 19.02

Tech: Analyst:

ARM JUM

Date Prep: 06.15.18 12.00 % Moisture: Basis:

Wet Weight

| Cas Number | Result                          | RL   |  | Units   | Analysis Date  | Flag  | Dil  |
|------------|---------------------------------|--|--|---|--|---|--|
| PHC610     | <15.0                           | 15.0   |  | mg/kg   | 06.15.18 15.27   | U   | 1  |
| C10C28DRO  | 258                             | 15.0   |  | mg/kg   | 06.15.18 15.27   |   | 1  |
| PHCG2835   | 17.1                            | 15.0   |  | mg/kg   | 06.15.18 15.27   |   | 1  |
| PHC635     | 275                             | 15.0   |  | mg/kg   | 06.15.18 15.27   |   | 1  |
|            | Cas Number                      | %<br>Recovery  | Units  | Limits  | Analysis Date  | Flag  |  |
|            | 111-85-3                        | 92   | %  | 70-135  | 06.15.18 15.27   |   |  |
|            | 84-15-1                         | 99   | %  | 70-135  | 06.15.18 15.27   |   |  |
|            | PHC610<br>C10C28DRO<br>PHCG2835 | PHC610 <15.0 C10C28DRO 258 PHCG2835 17.1 PHC635 275  Cas Number 111-85-3 | PHC610 <15.0 15.0 C10C28DRO 258 15.0 PHCG2835 17.1 15.0 PHC635 275 15.0 % Recovery 111-85-3 92 | PHC610 <15.0 15.0 C10C28DRO 258 15.0 PHCG2835 17.1 15.0 PHC635 275 15.0 Cas Number Cas Number 111-85-3 92 % | PHC610 <15.0 15.0 mg/kg C10C28DRO 258 15.0 mg/kg PHCG2835 17.1 15.0 mg/kg PHC635 275 15.0 mg/kg  Cas Number % Recovery Units Limits 111-85-3 92 % 70-135 | PHC610 <15.0 15.0 mg/kg 06.15.18 15.27 C10C28DRO 258 15.0 mg/kg 06.15.18 15.27 PHCG2835 17.1 15.0 mg/kg 06.15.18 15.27 PHC635 275 15.0 mg/kg 06.15.18 15.27  Cas Number Recovery Units Limits Analysis Date 111-85-3 92 % 70-135 06.15.18 15.27 | PHC610 <15.0 15.0 mg/kg 06.15.18 15.27 U C10C28DRO 258 15.0 mg/kg 06.15.18 15.27 PHCG2835 17.1 15.0 mg/kg 06.15.18 15.27 PHC635 275 15.0 mg/kg 06.15.18 15.27  Cas Number Recovery Units Limits Analysis Date Flag 111-85-3 92 % 70-135 06.15.18 15.27 |





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id: BH01 C

Matrix: Soil

Date Received:06.14.18 14.00

Lab Sample Id: 589277-003

Date Collected: 06.13.18 11.15

Sample Depth: 12.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

% Moisture:

Tech: Analyst: ALJ ALJ

Date Prep:

06.14.18 16.00

Basis: Wet Weight

| Parameter            | Cas Number  | Result     | RL            |       | Units  | Analysis Date  | Flag | Dil |
|----------------------|-------------|------------|---------------|-------|--------|----------------|------|-----|
| Benzene              | 71-43-2     | < 0.00200  | 0.00200       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| Toluene              | 108-88-3    | < 0.00200  | 0.00200       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| Ethylbenzene         | 100-41-4    | < 0.00200  | 0.00200       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| m,p-Xylenes          | 179601-23-1 | < 0.00400  | 0.00400       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| o-Xylene             | 95-47-6     | < 0.00200  | 0.00200       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| Total Xylenes        | 1330-20-7   | < 0.00200  | 0.00200       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| Total BTEX           |             | < 0.00200  | 0.00200       |       | mg/kg  | 06.14.18 19.44 | U    | 1   |
| Surrogate            |             | Cas Number | %<br>Recovery | Units | Limits | Analysis Date  | Flag |     |
| 4-Bromofluorobenzene |             | 460-00-4   | 109           | %     | 70-130 | 06.14.18 19.44 |      |     |
| 1,4-Difluorobenzene  |             | 540-36-3   | 103           | %     | 70-130 | 06.14.18 19.44 |      |     |



## **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

**RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate MS Matrix Spike MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



#### QC Summary 589277

#### LT Environmental, Inc.

Golden 8 Federal 1

**Inorganic Anions by EPA 300 Analytical Method:** 

Seq Number: 3053433 Matrix: Solid

Prep Method: E300P

Date Prep: 06.14.18

MB Sample Id:

7656636-1-BLK

LCS Sample Id: 7656636-1-BKS

LCSD Sample Id: 7656636-1-BSD

**Parameter** 

%RP RPD Units Analysis

Chloride

Result Amount 250

Spike

250

%Rec Result

%Rec 103 90-110

95

LCSD

D Limit 0 20

Date 06.14.18 12:29 mg/kg

Flag

< 5.00

257 103

LCS

LCS

Result

257

LCSD

Limits

**Analytical Method:** 

**Inorganic Anions by EPA 300** 

Matrix: Soil

Prep Method: E300P Date Prep: 06.14.18

Seq Number:

3053433

MSD Sample Id: 588898-002 SD

Parent Sample Id:

588898-002

MS Sample Id: 588898-002 S

RPD

**Parameter** 

MS MS

MSD MSD Limits %RP D

0

Units Analysis

Flag

Chloride

**Parent** Spike Result Amount

321

Result %Rec 558 95

Result %Rec 559

90-110

Limit 20 mg/kg

Date 06.14.18 17:57

Analysis

Date

06.14.18 12:46

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Seq Number:

3053433

Matrix: Soil

Date Prep:

06.14.18

Parent Sample Id: **Parameter** 

589043-001

MS Sample Id: 589043-001 S

MSD

MSD Limits %RP RPD

MSD Sample Id: 589043-001 SD

Chloride

**Parent** Spike Result Amount

247

Spike

Amount

MS MS Result %Rec 270 106

Result 264

%Rec 104 90-110 D Limit 2 20

Units

Flag

Analytical Method: TPH by SW8015 Mod Seq Number:

MB Sample Id:

**Parameter** 

7656745-1-BLK

3053586

MB

Result

7 35

LCS

%Rec

Matrix: Solid

Prep Method: TX1005P

mg/kg

Date Prep: 06.15.18

LCS Sample Id: 7656745-1-BKS LCSD Sample Id: 7656745-1-BSD RPD %RP Units Analysis LCSD Limits Flag Limit Date %Rec D

Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)

<15.0 <15.0 MB

1000 837 827 1000 MB LCS

LCS

Result

84 83 854 LCS

LCSD

Result

847

85 70-135 85 70-135

20 3 20

06.15.18 13:26 mg/kg mg/kg

06.15.18 13:26 Analysis

Surrogate 1-Chlorooctane o-Terphenyl

%Rec 80

Flag 84

Flag %Rec 107 86

LCSD LCSD Flag %Rec 109

83

Limits 70-135 70-135

Units Date 06.15.18 13:26 % 06.15.18 13:26 %

MS/MSD Percent Recovery Relative Percent Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result = MS/LCS Result  $\mathbf{C}$ 

= MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec Parent Sample Id:

Flag

Flag



#### **QC Summary** 589277

#### LT Environmental, Inc.

Golden 8 Federal 1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3053586

Matrix: Soil MS Sample Id: 589277-001 S 589277-001

Prep Method: TX1005P

Date Prep: 06.15.18

MSD Sample Id: 589277-001 SD

| Parameter                         | Parent<br>Result | Spike<br>Amount | MS<br>Result | MS<br>%Rec | MSD<br>Result | MSD<br>%Rec | Limits | %RP<br>D | RPD<br>Limit | Units | Analysis<br>Date |
|-----------------------------------|------------------|-----------------|--------------|------------|---------------|-------------|--------|----------|--------------|-------|------------------|
| Gasoline Range Hydrocarbons (GRO) | <15.0            | 999             | 820          | 82         | 871           | 87          | 70-135 | 6        | 20           | mg/kg | 06.15.18 14:26   |
| Diesel Range Organics (DRO)       | 331              | 999             | 1140         | 81         | 1160          | 83          | 70-135 | 2        | 20           | mg/kg | 06.15.18 14:26   |

| Surrogate      | MS<br>%Rec | MS<br>Flag | MSD MSD<br>%Rec Flag | Limits | Units | Analysis<br>Date |
|----------------|------------|------------|----------------------|--------|-------|------------------|
| 1-Chlorooctane | 109        |            | 102                  | 70-135 | %     | 06.15.18 14:26   |
| o-Terphenyl    | 54         | **         | 90                   | 70-135 | %     | 06.15.18 14:26   |

Analytical Method: BTEX by EPA 8021B

3053603 Seq Number:

MB Sample Id:

7656667-1-BLK

Matrix: Solid

LCS Sample Id: 7656667-1-BKS

Prep Method: SW5030B

Date Prep: 06.14.18

LCSD Sample Id: 7656667-1-BSD

| Parameter    | MB<br>Result | Spike<br>Amount | LCS<br>Result | LCS<br>%Rec | LCSD<br>Result | LCSD<br>%Rec | Limits | %RP<br>D | RPD<br>Limit | Units | Analysis<br>Date |
|--------------|--------------|-----------------|---------------|-------------|----------------|--------------|--------|----------|--------------|-------|------------------|
| Benzene      | < 0.00200    | 0.100           | 0.0941        | 94          | 0.0871         | 87           | 70-130 | 8        | 35           | mg/kg | 06.14.18 17:19   |
| Toluene      | < 0.00200    | 0.100           | 0.101         | 101         | 0.0930         | 93           | 70-130 | 8        | 35           | mg/kg | 06.14.18 17:19   |
| Ethylbenzene | < 0.00200    | 0.100           | 0.0993        | 99          | 0.0925         | 93           | 70-130 | 7        | 35           | mg/kg | 06.14.18 17:19   |
| m,p-Xylenes  | < 0.00401    | 0.200           | 0.208         | 104         | 0.194          | 97           | 70-130 | 7        | 35           | mg/kg | 06.14.18 17:19   |
| o-Xylene     | < 0.00200    | 0.100           | 0.106         | 106         | 0.0910         | 91           | 70-130 | 15       | 35           | mg/kg | 06.14.18 17:19   |

| Surrogate            | MB<br>%Rec | MB<br>Flag | LCS<br>%Rec | LCS<br>Flag | LCSD<br>%Rec | LCSD<br>Flag | Limits | Units | Analysis<br>Date |
|----------------------|------------|------------|-------------|-------------|--------------|--------------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 98         |            | 92          |             | 99           |              | 70-130 | %     | 06.14.18 17:19   |
| 4-Bromofluorobenzene | 89         |            | 100         |             | 122          |              | 70-130 | %     | 06.14.18 17:19   |

Analytical Method: BTEX by EPA 8021B

Seq Number: 3053603

Parent Sample Id:

588822-002

Matrix: Soil

MS Sample Id: 588822-002 S

Prep Method: SW5030B Date Prep: 06.14.18

MSD Sample Id: 588822-002 SD

| Parameter    | Parent<br>Result | Spike<br>Amount | MS<br>Result | MS<br>%Rec | MSD<br>Result | MSD<br>%Rec | Limits | %RP<br>D | RPD<br>Limit | Units | Analysis<br>Date | Flag |
|--------------|------------------|-----------------|--------------|------------|---------------|-------------|--------|----------|--------------|-------|------------------|------|
| Benzene      | < 0.00201        | 0.100           | 0.0578       | 58         | 0.0661        | 65          | 70-130 | 13       | 35           | mg/kg | 06.14.18 17:55   | X    |
| Toluene      | < 0.00201        | 0.100           | 0.0592       | 59         | 0.0663        | 66          | 70-130 | 11       | 35           | mg/kg | 06.14.18 17:55   | X    |
| Ethylbenzene | < 0.00201        | 0.100           | 0.0519       | 52         | 0.0592        | 59          | 70-130 | 13       | 35           | mg/kg | 06.14.18 17:55   | X    |
| m,p-Xylenes  | < 0.00402        | 0.201           | 0.107        | 53         | 0.120         | 60          | 70-130 | 11       | 35           | mg/kg | 06.14.18 17:55   | X    |
| o-Xylene     | < 0.00201        | 0.100           | 0.0520       | 52         | 0.0572        | 57          | 70-130 | 10       | 35           | mg/kg | 06.14.18 17:55   | X    |

| Surrogate            | MS<br>%Rec | MS<br>Flag | MSD<br>%Rec | MSD<br>Flag | Limits | Units | Analysis<br>Date |
|----------------------|------------|------------|-------------|-------------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 106        |            | 97          |             | 70-130 | %     | 06.14.18 17:55   |
| 4-Bromofluorobenzene | 106        |            | 123         |             | 70-130 | %     | 06.14.18 17:55   |

C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Setting the Standard since 1990 XENCO ABORATORIES

# CHAIN OF CUSTODY

|                        |                           | Dallas Texas (214-902-0300)   | Stafford, Texas (281-240-4200)    | The same of the sa |
|------------------------|---------------------------|-------------------------------|-----------------------------------|--|
|                        | www.xenco.com             | Midland, Texas (432-704-5251) | San Antonio, Texas (210-509-3334) |  |
| Analytical Information | Xenco Quote # Xenco Job # | F                             | Phoenix, Arizona (480-355-0900)   |  |
| Matrix Codes           | 101                       |                               |                                   |  |

| Project Name/Number:  |
|---|
| Company Address:  3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705  Project Location:  Project Location: |
| Email: Phone No: Invoice To: XTO Energy - Kyle Littrell  Abaker@LTEnv.com (432) 704-5178                                |
|   |
| Samplers's Name Lynde Landberg  |
|   |
| No. Field ID / Point of Collection Sample # of Depth Date Time Matrix bottles   |
| S   |
|   |
| 3 8HOIC 12.5' V 11:15 S 1   |
| 0 4   |
| 0   |
| 7   |
| 00  |
| Φ   |
| 10 Turnaround Time ( Business days ) Data Deliverable Information   |
| Same Day TAT S Day TAT Level II Std QC  |
| Next Day EMERGENCY ☐7 Day TAT ☐ Level III Std QC+ Forms   |
| 2 Day EMERGENCY Contract TAT Level 3 (CLP Forms)  |
| 3 Day EMERGENCY TRRP Checklist  |
| TAT Starts Day received by Lab, if received by 5:00 pm  |
| Sample: Date/Time: Date/Time: DM/S//R 13: SE  |
| 6-14-8-14:00  |
| Relinquished by:    Date Time:   Received By:   5   5   |

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Final 1.000

6/13/2018



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# XENCO Laboratories

#### Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 06/14/2018 02:00:00 PM

Work Order #: 589277

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: R8

|   | Sample Receipt Checklist |     | Comments |
|---|--------------------------|-----|----------|
| #1 *Temperature of cooler(s)?                 |                          | 3.5 |          |
| #2 *Shipping container in good condition?     |                          | Yes |          |
| #3 *Samples received on ice?                  |                          | Yes |          |
| #4 *Custody Seals intact on shipping contain  | er/ cooler?              | N/A |          |
| #5 Custody Seals intact on sample bottles?    |                          | N/A |          |
| #6*Custody Seals Signed and dated?            |                          | N/A |          |
| #7 *Chain of Custody present?                 |                          | Yes |          |
| #8 Any missing/extra samples?                 |                          | No  |          |
| #9 Chain of Custody signed when relinquished  | ed/ received?            | Yes |          |
| #10 Chain of Custody agrees with sample lal   | pels/matrix?             | Yes |          |
| #11 Container label(s) legible and intact?    |                          | Yes |          |
| #12 Samples in proper container/ bottle?      |                          | Yes |          |
| #13 Samples properly preserved?               |                          | Yes |          |
| #14 Sample container(s) intact?               |                          | Yes |          |
| #15 Sufficient sample amount for indicated to | est(s)?                  | Yes |          |
| #16 All samples received within hold time?    |                          | Yes |          |
| #17 Subcontract of sample(s)?                 |                          | N/A |          |
| #18 Water VOC samples have zero headspa       | ice?                     | N/A |          |

| * Must be | completed for after-hours de | elivery of samples prior to plac | ing in the refrigerator |
|-----------|------------------------------|----------------------------------|-------------------------|
| Analyst:  |                              | PH Device/Lot#:                  |                         |
|           | Checklist completed by:      | Brianna Teel                     | Date: <u>06/14/2018</u> |
|           | Checklist reviewed by:       | Jessica Kramer  Jessica Kramer   | Date: <u>06/14/2018</u> |