RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

PERMIT TO RECEIVE, STORE, HANDLE AND TREAT CERTAIN NONHAZARDOUS OIL AND GAS WASTES

AMENDED

Permit Nos: STF-0110, P012384, P012385, P012386, P012387, P012388, P012389, P012390, P012391, P012392, P012393, P012394, P012395 and P012396

R360 ENV SOLUTIONS OF TX, LLC
3 WATERWAY SQUARE PLACE STE 550
THE WOODLANDS TX 77380

Based on information contained in the original application received December 28, 2015, the amendment request received November 5, 2018, the amendment request received on April 30, 2019, and subsequent information received to date, you are hereby authorized to receive, store, handle, treat and dispose of certain non-hazardous oil and gas wastes as specified below at the following facility:

Reagan County Commercial Oil and Gas Waste Separation and Disposal Facility
195 acres of the T&P RR CO Survey, Abstracts 571 and 409
Latitude, Longitude: 31.188361°, -101.392317°
Reagan County, Texas
RRC District 7C, San Angelo

NARRATIVE DESCRIPTION OF PROCESS:

Incoming oil and gas waste shall be offloaded into the Collecting/Receiving Pits (P012389, P012390 and P012391) or onto the Collecting/Drying Pits (P012392, P012393 and P012394) for passive separation depending on liquid content and composition of the waste. Only dry solid waste material shall be placed onto the Collecting/Drying Pits. Wastes collected from the Collecting/Washout Pit Area (P012395 and P012396) will be pumped to a gun barrel fractionation tank for further separation and then stored in separate oil and water tanks.

Separated liquid waste collected from the Collecting/Receiving Pits, Collecting/Drying Pits, and the tanks will be pumped to the Collecting Pit (P012388) to evaporate. If the Collecting Pit reaches capacity, excess liquid waste will be disposed of at an off-site permitted Class II injection well. Skim oil will be recovered and sold.
Disposal operations at this facility consist of four Disposal Pits (P012384, P012385, P012386 and P012387) constructed in a phased sequence. Disposal Pits will be excavated, constructed, filled, capped and closed according to the cell number (i.e., Cell 1 is first, and Cell 4 is last). Solid waste collected from the Collecting/Receiving Pits, Collecting/Drying Pits, and Collecting/Washout Pit Area will be disposed of in the active Disposal Cell after passing a Paint Filter Test. Solid waste received at the facility that has met disposal criteria will be disposed of in the active Disposal Cell.

Authority is granted by the Railroad Commission of Texas (RRC) to receive, store, handle, treat and dispose of certain nonhazardous oil and gas wastes in accordance with 16 Texas Administrative Code (TAC), Part 1, § 3.8 (Statewide Rule 8) and is subject to the following conditions:

I. GENERAL PERMIT CONDITIONS

A. The effective date of this permit is July 5, 2019 and expires on July 4, 2024.

B. In accordance with 16 TAC § 3.78 the permittee shall maintain financial security in the amount of $5,827,832.00 until this facility and all the referenced Permit Nos: STF-0110, Collecting/Washout Pits (P012395 and P012396), Collecting/Receiving Pits (P012389, P012390 and P012391), Collecting/Drying Pits (P012392, P012393 and P012394), Collecting Pit (P012388), and Disposal Pits (P012384, P012385, P012386 and P012387), have been closed in accordance with this permit. Technical Permitting reserves the right to revise this amount, as necessary. Prior to any modification of this facility that would require increased financial security, an updated closure cost estimate must be submitted to Technical Permitting in Austin, and any additional financial security must be filed with and approved by the RRC prior to making that modification.

C. No waste may be received at the referenced facility until a restrictive covenant is signed by a representative of the permittee, the landowner, and a representative of the RRC; and the signed document is filed in the Real Property Records Section of Reagan County, Texas, and proof of the filing with Reagan County is submitted to and approved by the RRC.

D. No waste may be received at the referenced facility until the groundwater monitoring wells required by Permit Condition XI. of this permit have been completed, developed and sampled. The documentation required by Permit Conditions XI.A. and XI.C. must be provided to and approved by Technical Permitting within 30 days after installation of groundwater monitoring wells.

E. A copy of the site-specific Spill Control Plan that details means and methods of waste management and containment in the event of a release or discharge must be maintained on-site and made available to RRC staff for review and inspection upon request.

F. The facility’s Stormwater Management Plan shall be maintained on-site and made available upon request of the RRC.

G. This permit does not authorize the discharge from the facility of any oil and gas waste, including contaminated or contact stormwater.
H. The permittee may not receive, store, handle, treat or dispose of oil and gas waste at the facility until all necessary air permits or exemptions (if any) are obtained from the Texas Commission on Environmental Quality (TCEQ).

I. Technical Permitting in Austin and the San Angelo District Office must be notified in writing when construction of the facility is initiated and with the completion of each disposal pit and/or each waste management unit.

J. Technical Permitting in Austin and the appropriate District Office must be notified in writing upon final completion of construction of the facility. The permittee may not begin receiving, storing, handling, treating or disposing of oil and gas waste until the San Angelo District Office has performed an inspection of the completed facility and has verified that the facility is constructed in accordance with the application and this permit.

K. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the facility must be in accordance with the information represented in the permit application and attachments thereto. When construction of the facility is completed, submit the “as-built” plans to be incorporated as part of the permit application.

L. An On-Site Sewage Facility (OSSF) may be constructed, operated, and maintained within the boundaries of the subject facility without an additional permit from the RRC if:

1. the OSSF waste is not commingled with any other oil and gas waste;
2. the system is designed by a Professional Engineer registered in the state of Texas or a sewage system installer licensed in the state of Texas; and
3. the construction, operation, and maintenance of the OSSF complies with all applicable local, county, and state requirements.

M. Any deviation from this permit must be approved by amendment from Technical Permitting in Austin before implementation.

N. Any soil additives, stabilizers, bioaccelerators or treatment chemicals must be approved by Technical Permitting prior to use at the facility.

O. Safety Data Sheets (SDS) must be submitted to Technical Permitting in Austin for any chemical or component proposed to be used in the treatment of waste at the facility. Use of the compound is contingent upon RRC approval. All chemicals must be stored according to the manufacturer’s specifications.

P. All chemical laboratory analyses required to be performed in accordance with this permit must be performed using appropriate Environmental Protection Agency (EPA) methods or Standard Methods by an independent, National Environmental Laboratory Accreditation Program (NELAP) certified laboratory neither owned nor operated by the permittee. Any sample collected for laboratory analysis must be collected and preserved in a manner appropriate for that analytical method as specified by 40 CFR, Part 136. All geotechnical testing is to be performed utilizing tests standardized by the American Society for Testing and Materials (ASTM) and certified by a Texas licensed Professional Engineer.
Q. The permittee must make all records required by this permit available for review and/or copying during normal business hours upon request of RRC personnel.

R. The permit may be considered for administrative renewal upon review by the RRC. Any request for renewal should be received at least 60 days prior to the permit expiration date.

S. This permit is not transferable without the consent of the RRC. Any request for permit transfer should be filed with Technical Permitting in Austin at least 60 days before the permittee wishes the transfer to take place.

T. The permittee must submit a Quarterly Report according to the following:

1. The report shall contain applicable information as required in Permit Conditions III.G., IV.K., VII.J., IX.G., IX.N., XI.C., XIV.C., and XVI.G.

2. The quarterly reporting periods shall be January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31 of each year.

3. The reports must be submitted to Technical Permitting in Austin and the appropriate District Office no later than the 30th day of the month following each reporting period, or each April 30th, July 30th, October 30th, and January 30th, respectively.

4. An Executive Summary shall be included that describes facility operations and relevant activities that occurred during the specific quarter.

5. Data tables presenting volumes or amounts of treated waste shall be included.

6. Laboratory analytical results, corresponding chain of custody and other relevant data must be included.

U. Failure to comply with any provision of this permit shall be cause for modification, suspension, termination or cancellation of this permit if Technical Permitting determines that the permittee is in violation of Statewide Rule 8 (d)(6)(E).

II. AUTHORIZED WASTES

A. Only oil and gas wastes subject to the jurisdiction of the RRC that are non-hazardous according to Subtitle C (Resource Conservation and Recovery Act (RCRA)) may be received, stored, treated, processed, or disposed of at this facility. You may receive, store, handle, treat, process, and dispose of only the following oil and gas wastes:

1. Water-based drilling fluids and associated cuttings

2. Oil-based drilling fluids and associated cuttings

3. Contaminated soils from crude oil, pipeline, condensate, and saltwater spills

4. Hydraulic fracturing flow-back water and associated solids including sand

5. Formation sands and other solids from saltwater storage tanks or vessels and saltwater pits
6. Tank bottoms from gas plants, crude oil Reclamation Plants, crude oil separation facilities, and crude oil production facilities, which do not exceed 7% in oil content as determined by a Standard American Petroleum Institute (API) “shake out” test

7. Waste material from produced water collecting pits

8. Solid waste generated from gas dehydration and sweetening (spent filters and filter media, molecular sieves, precipitated amine sludge, iron sponge, and hydrogen sulfide scrubber sludge)

9. Iron sulfide, which has been fully oxidized

10. Spent activated carbon and other oil and gas waste filtering and separation media

11. Liners from reserve pits and washout pits

12. Non-injectable waste waters (too many solids to directly inject into an injection well without pretreatment for solids removal)

13. Inert wastes as defined by Statewide Rule 8 such as contaminated concrete or wood

14. Other non-hazardous wastes generated in association with the exploration, development, and production of oil and gas resources subject to the jurisdiction of the RRC.

B. No other waste may be accepted at this facility.

C. RCRA non-exempt wastes under the jurisdiction of the RRC may be accepted and processed at the facility if analytical results demonstrate that the waste is characteristically non-hazardous as determined in Permit Condition III.D.

D. No oil and gas Naturally Occurring Radioactive Material (NORM) waste as defined in 16 TAC §4.603 (Oil and Gas NORM) or waste from a facility that is licensed by the Texas Department of State Health Services (DSHS) to process or treat oil and gas NORM waste may be received at the facility.

E. No asbestos-containing material regulated under the Clean Air Act or polychlorinated biphenyls (PCB)-containing material regulated under the Toxic Substances Control Act may be accepted for processing at this facility.

F. All waste haulers received at the facility must be currently permitted RRC Oil and Gas Waste Haulers and must have the subject facility listed as an authorized disposal facility on their “Oil and Gas Waste Hauler’s Authority to use Approved Disposal/Injection System”, (Form WH-3).

III. WASTE TESTING AND RECORD KEEPING REQUIREMENTS

A. For the purposes of this permit a representative sample of incoming waste is defined as a composite sample composed of four grab samples mixed to form one composite sample from each 50 cubic yards of waste material from each job (e.g., from each well, pit, spill location).

B. Each load of incoming waste, other than water-based drilling fluids and associated cuttings, or oil-based drilling fluid and associated cuttings, must be scanned for the
presence of NORM using a scintillation meter with a sodium iodide detector or other equivalent devices that comply with 25 TAC 289.259, Texas Regulations for Control of Radiation (TRCR Part 46). Manufacturer’s specifications must be submitted to Technical Permitting for equivalent devices used for NORM detection. All instrument calibration records must be maintained onsite and made available upon request. Any load with a reading of 50 microroentgens per hour or greater may not be unloaded or processed at the facility unless further analysis of the waste demonstrates that the waste does not exceed 30 picocuries per gram of Radium-226 combined with Radium-228, or 150 picocuries per gram of any other radionuclide.

C. **Prior** to receipt at the site, representative samples of waste from commercial oil and gas facilities and Reclamation Plants must be analyzed for either of the parameters listed below and may not exceed the limitation for the respective parameter:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>LIMITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Organic Halides (TOX)</td>
<td>100 mg/l</td>
</tr>
<tr>
<td>(<em>EPA Method 9020B</em>)</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>Extractable Organic Halides (EOX)</td>
<td>100 mg/kg</td>
</tr>
<tr>
<td>(<em>EPA Method 9023</em>)</td>
<td></td>
</tr>
</tbody>
</table>

Special authorization for disposal of waste with a TOX/EOX > 100 ppm may be considered. Authority must be obtained from Technical Permitting in Austin prior to acceptance of that waste.

D. **Prior** to acceptance at the site, representative samples of incoming RCRA non-exempt waste or any international waste must be analyzed for the following parameters and may not exceed the specified limitations:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>LIMITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosivity</td>
<td>2.0 – 12.5 standard units (s.u.)</td>
</tr>
<tr>
<td>(<em>EPA method 1110A/ 9040C or equivalent</em>)</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td></td>
</tr>
<tr>
<td>Ignitability (<em>EPA method 1010A/ 1020B/ 1030A</em>)</td>
<td>Flash point &lt; 60° C or 140°F</td>
</tr>
<tr>
<td>Toxicity (<em>EPA Method 1311</em>)</td>
<td></td>
</tr>
<tr>
<td>Metals: Toxic Characteristic Leaching Procedure (TCLP) (<em>EPA Method 1311/6010/6020/7147A</em>)</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Barium</td>
<td>&lt; 100.0 mg/L</td>
</tr>
</tbody>
</table>
### Parameter Limitation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium</td>
<td>&lt; 1.0 mg/L</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.2 mg/L</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt; 1.0 mg/L</td>
</tr>
<tr>
<td>Silver</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Benzene (EPA Method 1311/8260B/8021)</td>
<td>&lt; 0.5 mg/L</td>
</tr>
</tbody>
</table>

E. The permittee must maintain the following records on each load of waste received at the facility for a period of three (3) years from the date of receipt:

1. Description of the site where the waste was generated, including:
   a. Generator name
   b. Lease name and number and well number(s), or gas ID number(s), or American Petroleum Institute (API) well number(s); or latitude and longitude coordinates in decimal degrees if waste was not generated on a lease
   c. County

2. Name and RRC permit number of the transporter;

3. Volume of waste material (specify units); and

4. Detailed description of the type of waste, including any analysis required by Permit Conditions III.B., III.C. and III.D. above.

F. The permittee shall maintain the following records on each load of waste removed from the facility for a period of three (3) years from the date of receipt:

1. Date waste is removed and hauled to a disposal facility;

2. Name and RRC permit number of the transporter;

3. Volume (specify units) of each shipment of waste hauled to a disposal facility;

4. Type of waste (basic sediment, water, water-based mud, etc.); and

5. Name and permit number of the facility

G. A report must be submitted to Technical Permitting in Austin and the appropriate District Office as part of the Quarterly Report required in Permit Condition I.T. and shall include the following information:

1. A table summarizing all incoming waste, including the following:
   a. Generator name
   b. Lease name and number and well number(s), or gas ID number(s), or American Petroleum Institute (API) well number(s); or latitude and longitude coordinates in decimal degrees if the waste was not generated on a lease
c. County

d. Name and RRC permit number(s) of the transporter(s)

e. Description and total volume (specify units) of waste from each job (for which Permit Conditions III.G.1.a, III.G.1.b., and III.G.1.c are the same)

f. The total volume of each type of waste material received during the quarter

2. A table summarizing all waste removed from the facility, including the following:
   a. Name and permit number of the disposal facility
   b. Name and RRC permit number(s) of the transporter(s)
   c. Description and total volume (specify units) of waste hauled to the disposal facility
   d. The total volume of each type of waste that leaves the facility for disposal or final disposition during the quarter

3. Copies of all analyses required by Permit Conditions III.B., III.C., and III.D. above

IV. GENERAL FACILITY DESIGN AND MAINTENANCE REQUIREMENTS

A. The general layout and arrangement of the facility shall be consistent with the “SITE PLAN WITH CROSS SECTIONS” (Drawing 3) diagram received February 4, 2019, which is attached as Permit Appendix A.

B. A sign must be posted at each entrance to the facility. The sign must be readily visible and show the operator name, facility name, and permit number in letters and numerals at least three inches in height.

C. The entire facility shall consist of and is defined by the following waste management unit designations:

1. Tank Battery:
   a. One 500-bbl Gun Barrel Tank;
   b. Three 300-bbl Saltwater Storage Tanks; and
   c. One 300-bbl Oil Tank.

2. One Collecting/Washout Pit Area:
   a. Eight Truck Wash Bays;
      a. Collecting/Washout Trench (P012395); and
      b. Collecting/Washout Sump (P012396).

3. Three Collecting/Receiving Pits (P012389, P012390 and P012391);

4. Three Collecting/Drying Pits (P012392, P012393 and P012394);

5. One Collecting Pit (P012388);

6. Four Disposal Pits
a. Disposal Pit #1(P012384) 13.5 acres;

b. Disposal Pit #2(P012385) 12.75 acres;

c. Disposal Pit #3(P012386) 12.69 acres; and

d. Disposal Pit #4(P012387) 11.0 acres.

7. One Non-Contact Stormwater Retention Pond.

D. No waste, treated or untreated, may be directly placed on the ground.

E. All storage tanks, equipment and roll-off boxes must be maintained in a leak-free condition. If inspection of a tank or storage vessel reveals deterioration or leaks, the tank or vessel must be repaired before resuming its use.

F. Any spill of waste, chemicals, or any other waste related material must be collected and containerized within 24 hours and conveyed through the treatment process or disposed of in an authorized manner.

G. Any chemical used in the treatment process shall be stored in vessels designed for the safe storage of that particular compound and these vessels shall be maintained in a leak free condition.

H. Dikes or containment structures must be constructed around all waste management units. All earthen dikes surrounding pits and constructed as perimeter berms must be compacted or constructed of material that meets 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density and meet a permeability of $1 \times 10^{-7}$ cm/sec or less when compacted. During construction, successive lifts should not exceed nine inches in thickness, and the surface between lifts should be scarified to achieve a good seal. Each berm must maintain a slope no steeper than a one to three (vertical to horizontal) ratio, unless constructed of concrete or equivalent material (firewalls). These structures must be used to divert non-contact storm water around the waste management areas and contain and isolate contact storm water within the waste management units.

I. The facility must maintain security to prevent unauthorized access. Access shall be secured by a 24-hour attendant or a six-foot-high security fence and locked gate when unattended. Fencing shall be required unless terrain or vegetation prevents truck or livestock access except through entrances with lockable gates.

J. No oil may be allowed to accumulate on top of the water or wastes stored in the pits. Any oil on top of any waste liquids must be skimmed off and handled in accordance with RRC rules. Any recovered oil must be recorded and filed as either a Skim Oil/Condensate Report (Form P-18) or a “Letter of Authority Request for Oil Movement” (Form T-1) Letter:

1. A Skim Oil/Condensate Report (Form P-18) must be filed with the RRC every month to record skim oil volumes recovered and sold during the operation of this facility. If no skim oil is recovered for a given month, a (Form P-18) should still be filed with the RRC.

OR

2. An original signed “Letter of Authority Request for Oil Movement” (Form T-1) must initially be submitted on letterhead to Field Operations, Austin, TX, Oil and Gas
Division, for every event in which sellable skim oil is recovered and intended to be sold during the operation of this facility. Filing frequency requirements may be redefined after the initial oil movement request has been processed. The request must include:

a. The time period for which oil movement authority is requested.
b. The name of the applicant requesting to move the oil.
c. Volume (barrels) of oil to be moved.
d. Name and location of the facility which oil will be moved.
e. Name, address, telephone, and fax number of facility buying the oil to be moved.
f. Contact person, T-1 permit number, and P-5 Operator Number of the oil buyer.
g. A description of the source(s) of the oil at the facility.

K. Each month an inspection of the entire facility must be performed on the pits, all concrete slabs, processing equipment, containment berms, and aboveground storage tanks or vessels for deterioration, leaks and spills. The records of each inspection must be kept on-site and maintained for a period of three (3) years from the date of the inspection. The following must be included in the inspection report and submitted as part of the Quarterly Report required by Permit Condition I.T.:

1. The sacrificial soil layer of the Collecting/Drying Pits must be inspected at least monthly to verify that the sacrificial soil cover in each pit is at least three (3) feet thick. Should the inspection show that the sacrificial soil cover is less than three (3) feet thick, additional soil must be added as needed.

2. The results of the monthly inspection of concrete slabs within the facility for evidence of deterioration, leakage, or storm water run-on, and a description of corrective action taken, if any.

3. The results of the monthly inspection of process equipment, tanks, roll-off boxes, firewalls or containment berms for evidence of deterioration or leakage, and a description of corrective action taken, if any.

4. The results of the monthly inspection of waste levels within the storage areas, tanks, and roll-off boxes, and a description of corrective action taken, if any.

5. The results of the monthly inspections of the silt fencing/rock filter dams or gabions installed to control and modulate run-off and indicate whether debris has been removed or maintenance performed.

L. Any permitted pit or cell not equipped with a leak detection system must be emptied and visually inspected annually for deterioration and leaks. A record of each inspection and photographs of the interior of each pit must be maintained for the life of the pit and shall be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.T. The San Angelo District Office must be notified by phone or email at least 48 hours before emptying the pit for inspection. The permittee must maintain a record of when each pit is inspected and the results of the inspection. This record must be maintained by the permittee for the life of the pit.
M. All pits equipped with a leak detection system must be monitored at least weekly and the highest volume removed from the leak detection system during the seven-day period must be reported. The permittee must maintain a record of when the liner, containment berm, and the leak detection system are inspected and the results of each inspection. Records of leak detection system monitoring must be submitted in table form within the Quarterly Report required in Permit Condition I.T. The physical record must be maintained by the permittee for the life of the pit. The physical record shall be filed with the RRC upon request. The record must include:

1. The date of fluid level measuring;
2. The fluid level or volume;
3. The volume of fluid removed;
4. The electrical conductivity; and
5. The chloride concentration of the fluids removed.

N. The fluid removed from the leak detection system will be compared to the appropriate calculated Action Leakage Rate (ALR) for each pit, as noted in Permit Conditions VII.J.1 and IX.O.1.

O. If the leak detection system indicates a liner system failure or if a crack or other failure is detected during inspection, no waste may be added to the pit. The affected component must be replaced or repaired and inspected by the appropriate RRC District Office before use of the pit is resumed.

P. The liner systems must be inspected whenever evidence of a liner leakage arises. If inspection of the liner reveals cracking, a leak or other loss of integrity, the pit must have all waste immediately removed. No waste shall be added to the affected pit until the liner has been replaced or repaired and re-inspected by RRC personnel before resuming use of the pit.

V. CONSTRUCTION AND OPERATION OF THE TANK BATTERY

A. The following equipment shall be located at the Tank Battery:

1. One 500-bbl Gun Barrel Tank;
2. Three 300-bbl Saltwater Storage Tanks; and
3. One 300-bbl Oil Tank.

B. The Tank Battery shall be surrounded by an earthen berm that is at least 5 feet and 6 inches in height and must maintain sufficient volume inside the firewall as specified in Permit Condition V.C. The slope of each berm wall may not exceed a one to three (vertical to horizontal) ratio and must meet compaction criteria specified in Permit Condition IV.I.

C. All the storage tanks containing fluid waste or fuel shall be contained within dikes or berms. Secondary containment of 120% total storage capacity is recommended, however a firewall capacity that will capture 100% of the volume of the largest tank plus the volume of a 25 year/24-hour rainfall event for Reagan County is acceptable.
D. Spills within the secondary containment berms shall be containerized immediately and contact stormwater must be managed as a waste.

VI. COLLECTING/WASHOUT PIT AREA (P012395 and P012396), COLLECTING/RECEIVING PITS (P012389, P012390 and P012391), AND COLLECTING/DRYING PITS (P012392, P012393 and P012394) CONSTRUCTION AND OPERATION

A. A sign must be posted at each pit showing the pit permit number in letters and numerals at least three inches in height.

B. At least two feet of freeboard must be maintained between the fluid level in the pits and the top of the pit walls.

C. Spills within the secondary containment berms must be containerized immediately and contact stormwater must be managed as a waste.

D. COLLECTING/WASHOUT PIT AREA (P012395 and P012396)

1. The general layout and arrangement of the Collecting/Washout Pit Area shall consist of eight truck wash bays, a Collecting/Washout Pit Trench (P012395), and a Collecting/Washout Pit Sump area (P012396), and must be consistent with the “TRUCK WASHOUT PLAN” (Drawing 5) diagram received on April 4, 2018, and the “TRUCK WASHOUT CROSS SECTIONS” (Drawing 6) and the “TRUCK WASHOUT CROSS SECTIONS” (Drawing 6A) diagrams received on February 26, 2018, which are as Permit Appendix B.

2. Use of the pits is limited to the collection of oil and gas wastewater, rinseate and residual solids generated from the washout of trucks and frac tanks. No other oil field fluids or oil and gas wastes may be stored or staged in the pits.

3. The Collecting/Washout Pit Area shall consist of an above grade structure that will have eight washout bays that are approximately 20 feet wide by 45 feet long. A concrete curb shall be constructed that is 24 inches in height by 5 feet wide at the entrance to the truck wash unloading bays. The remaining portions of the pit (side walls, trench and sump) must be surrounded by a concrete wall that is at least 2 feet in height and eight inches wide. The washout bays slope towards the Collecting/Washout Pit Trench (P012395) and then gravity flows to the sump Collecting/Washout Pit Sump (P012396).

4. The Collecting/Washout Pit Trench (P012395) must be approximately 174 feet long by 8 feet wide by 5 feet deep. The usable capacity of the Collecting/Washout Pit Trench (P012395) must not exceed 383 barrels or 80 cubic yards.

5. The Collecting/Washout Pit Sump (P012396) must be approximately 9 feet long by 20 feet wide by 6 feet deep. The usable capacity of the Collecting/Washout Pit Sump (P012396) must not exceed 128 barrels or 27 cubic yards.

6. The floor of each bay shall have a minimum slope of 1% allowing for wash water to drain into the trench and sump.
7. Residual solid waste that accumulates at the bottom of the pit shall be removed regularly to maintain freeboard and shall be disposed of in an authorized manner.

8. The pits must be constructed of a reinforced concrete primary liner at least eight-inches thick, underlain by a 60-mil high-density polyethylene (HDPE) secondary liner.

E. COLLECTING/RECEIVING PITS (P012389, P012390 and P012391)

1. The general layout and arrangement of the Collecting/Receiving Pits (P012389, P012390 and P012391) must be constructed as shown on the "RECEIVING PITS PLAN" (Drawing 7) and "RECEIVING PITS SECTIONS AND DETAILS" (Drawing 8) diagrams received on April 30, 2019, which are as Permit Appendix C.

2. Use of the pits is limited to the collection of non-hazardous oil and gas wastes as specified in Permit Condition II.A. prior to disposal by injection into an offsite Class II disposal well or placement onto the Collecting/Drying Pits for further stabilization. No other oil field fluids or oil and gas wastes may be stored or staged in the pit.

3. The pits must have approximate dimensions no greater than 95 feet by 300 feet by 9 feet. The usable capacity of each pit must not exceed 29,542 barrels or 6,143 cubic yards.

4. The floor of each pit must have a minimum slope of 1% to allow fluids to drain to the low side of the pit.

5. The pits must be constructed in accordance with the liner installation methods included in the application and consist of a prepared subgrade, a reinforced concrete secondary liner with a minimum thickness of six inches, and a thick mild steel primary liner with a minimum thickness of 0.5 inches. A concrete curb must surround the unloading area of each pit. The curb must be at least 6-inches in height.

F. COLLECTING/DYING PITS (P012392, P012393 AND P012394)

1. The general layout and arrangement of the Collecting/Drying Pits (P012392, P012393 and P012394) must be constructed as shown on the "DYZING PADS PLAN" (Drawing 9) and the "DYZING PADS CROSS SECTIONS" (Drawing 10), diagrams received February 26, 2018, which are attached as Permit Appendix D.

2. Use of the pit is limited to the collection of non-hazardous oil and gas wastes as specified in Permit Condition II.A. prior to placement in the on-site disposal pit. No other oil field fluids or oil and gas wastes may be stored or staged in the pit.

3. The pits must have approximate dimensions no greater than 230 feet by 385 feet by 7.5 feet deep. The usable capacity of each pit must not exceed 28,974 barrels or 6,025 cubic yards.

4. At least a 2-foot buffer must be maintained between the toe of the staged waste and the and the containment berms. The waste staged in pit shall not exceed (2) two feet in height at any time.

5. The pits shall be constructed and used to gravity drain, air dry, evaporate or solidify semi-solid waste that does not pass the paint filter test.
6. Dried solid wastes that pass a paint filter test may be disposed of in an active disposal pit.

7. The pits must be constructed in accordance with the liner installation methods included in the application and consist of a prepared subgrade, a 60-mil high-density polyethylene (HDPE) primary liner, and three (3) feet of sacrificial soil cover on top of the primary liner. A minimum of three (3) feet of sacrificial soil cover must always be maintained.

G. The liners must be installed and maintained in accordance with best management and sound engineering practices.

H. The pits must be emptied and visually inspected annually for deterioration and leaks as required by Permit Condition IV.L.

I. The concrete liner must be inspected whenever evidence of liner leakage arises. If inspection of the concrete liner reveals cracking, a leak or other loss of integrity the pit, all of the waste must be immediately removed. No waste shall be added to the pits until the liner has been replaced or repaired and re-inspected by RRC personnel before resuming use of the pit(s).

J. The area surrounding the pits must be graded such that all surfaces slope away from the pits to prevent surface flow storm water from entering the pit.

K. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pits must be in accordance with the information represented on the application (Form H-11) and attachments thereto.

VII. COLLECTING PIT (P012388) CONSTRUCTION AND OPERATION

A. The general layout and arrangement of the Collecting Pit (P012388) must be constructed as shown on the “DISPOSAL CELL COLLECTING PIT DETAILS” (Drawing 15), the “COLLECTING PIT PLAN” (Drawing 16), and the “COLLECTING PIT SECTIONS” (Drawing 17) diagrams received February 26, 2018, which are attached as Permit Appendix E.

B. Use of the pit is limited to the collection of non-hazardous oil and gas wastes and contact stormwater prior to disposal by injection in an offsite Class II disposal well. No other oil field fluids or oil and gas wastes may be stored or staged in the pit.

C. A sign must be posted identifying the pit by name and permit number using letters and numerals at least three inches in height.

D. The pit must have approximate dimensions of 376 feet by 668 feet by 18 feet. The usable capacity must not exceed 593,255 barrels or 123,366 cubic yards.

E. The floor of the pit must have at least a 1% slope to allow fluids to drain to the leak detection sump.

F. At least two feet of freeboard must be maintained between the fluid level in the pit and the top of the pit berms.
G. The pit must be constructed in accordance with the liner installation methods included in the application and consist of 12 inches of compacted subgrade, a 60-mil high-density polyethylene (HDPE) secondary liner, and a 60-mil high-density polyethylene (HDPE) primary liner.

H. The liners and the leak detection system must be installed in accordance with the application, the liner manufacturer’s specifications and sound engineering practices.

I. The pit must be equipped with a leak detection system, which will consist of a HDPE drainage net with a thickness of at least 200-mil placed between the primary and secondary liners, along with a perforated collection pipe on the low end of the pond, a collection sump and riser system.

J. The leak detection system must be monitored as required by Permit Condition IV.M. and must be submitted in table form within the Quarterly Report required in Permit Condition I.T. The physical record must be maintained by the permittee for the life of the pit. The physical record must be filed with the RRC upon request.

K. If the leak detection system indicates a possible liner system failure, it must be inspected for deterioration and leaks within five days of the initial detection of the failure. The RRC District Office must be notified by phone or email within 24 hours of detection of the liner system failure. No additional waste shall be added to the pit in the event of a failure. After inspection, the identified failed component must be replaced or repaired and re-inspected by RRC personnel before resuming use of the pit. A liner system failure is defined as any of the following:

1. A volume withdrawn from the leak detection system that is greater than 5,635 gallons per day or 1,000 gallons per acre per day (GPAD).
2. Any failure in the leak detection and return system or any component thereof.
3. Any detected damage to or leakage from the secondary liner.

L. If the volume withdrawn from the leak detection system exceeds the volume stated in Permit Condition VII.J for 15 consecutive days or the weekly reported volume exceeds the volume stated in Permit Condition VII.J. at least once a month for three consecutive months, the appropriate District Office and Technical Permitting in Austin must be notified by phone or email within 24 hours of detection of the liner system failure. The operator must immediately initiate the removal of wastes from the pit. When removal of the waste is complete, the operator must notify Technical Permitting in Austin and the appropriate District Office in writing.

M. The area surrounding the pit must be graded such that all surfaces slope away from the pit, to prevent surface flow storm water from entering the pit.

N. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pit must be in accordance with the information represented on the application (Form H-11) and attachments thereto.
VIII. THE DISPOSAL PIT CONSTRUCTION (P012384, P012385, P012386 and P012387)

A. The general layout and arrangement of the Disposal Pits (P012384, P012385, P012386 and P012387) must be constructed and arranged as shown on the “DISPOSAL CELLS EXCAVATION PLAN” (Drawing 11), and “CELL SEQUENCING SECTION” (Sheet 2) diagrams received February 4, 2019, which are as Permit Appendix F.

B. The sequenced construction of the disposal pits, the associated perimeter berms, intercell berms, ditches, access roads, intermediate capping/closure and stormwater diversion channels for Disposal Pits P012384, P012385, P012386 and P012387 must be consistent with the “DISPOSAL CELL 1 EXCAVATION PLAN” (Drawing 1), “DISPOSAL CELL 1 INTERIM COVER PLAN” (Drawing 2), “DISPOSAL CELL 1 CROSS SECTION” (Drawing 3), “DISPOSAL CELL 1&2 EXCAVATION PLAN” (Drawing 4), “DISPOSAL CELL 1&2 INTERIM COVER PLAN” (Drawing 5), “DISPOSAL CELL 1&2 CROSS SECTION” (Drawing 6), “DISPOSAL CELL 1,2&3 EXCAVATION PLAN” (Drawing 7), “DISPOSAL CELL 1,2&3 INTERIM COVER PLAN” (Drawing 8), “DISPOSAL CELL 1,2&3 CROSS SECTION” (Drawing 9), “DISPOSAL CELLS 1-4 EXCAVATION PLAN” (Drawing 10), “DISPOSAL CELLS FINAL COVER PLAN” (Drawing 11), and “DISPOSAL CELL CROSS SECTION” (Drawing 12) diagrams received on February 4, 2019, and “DISPOSAL CELL CROSS SECTION” (Drawing 13) and the “DISPOSAL CELL CROSS SECTION” (Drawing 14) diagrams received on February 26, 2018, which are attached as Permit Appendix G.

C. Technical Permitting in Austin and the appropriate District Office must be notified in accordance with Permit Condition I.K. upon final completion of construction of each Disposal Pit. The permittee may not begin using the pit until the appropriate District Office has completed an inspection of the pit and provided verification that the pit is constructed in accordance with the application and this permit.

D. A sign must be posted identifying each Disposal Pit by name and permit number using letters and numerals at least three inches in height.

E. Earthen berms must be constructed to a minimum height of three feet surrounding each disposal cell to prevent surface flow storm water run-on and runoff. The slope of the berm walls may not exceed a one to three (vertical to horizontal) ratio and must meet compaction criteria specified in Permit Condition IV.H.

F. The dimensions and the total capacities for each Disposal Pit must not exceed the following:

<table>
<thead>
<tr>
<th>Cell No.</th>
<th>Total Volume (cu yd)</th>
<th>Length (ft)</th>
<th>Width (ft)</th>
<th>Height Above Grade (ft)</th>
<th>Depth Below Grade (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1 (P012384)</td>
<td>808,158</td>
<td>491</td>
<td>1,432</td>
<td>132</td>
<td>7</td>
</tr>
<tr>
<td>D-2 (P012385)</td>
<td>1,594,914</td>
<td>432</td>
<td>1,382</td>
<td>170</td>
<td>6</td>
</tr>
<tr>
<td>D-3 (P012386)</td>
<td>2,028,087</td>
<td>400</td>
<td>1,382</td>
<td>170</td>
<td>7</td>
</tr>
<tr>
<td>Cell No.</td>
<td>Total Volume (cu yd)</td>
<td>Length (ft)</td>
<td>Width (ft)</td>
<td>Height Above Grade (ft)</td>
<td>Depth Below Grade (ft)</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>-------------</td>
<td>------------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>D-4 (P012387)</td>
<td>1,968,527</td>
<td>386</td>
<td>1,417</td>
<td>114</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,399,686</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**G. LINER, LEAK DETECTION AND LEACHATE COLLECTION SYSTEMS FOR DISPOSAL PITS**

1. The pits must be constructed in accordance with the liner system installation methods included in the application and consist of (from bottom to top), a prepared subgrade, a geosynthetic clay liner (GLC), a 60-mil high-density polyethylene (HDPE) secondary liner, a 60-mil HDPE primary liner, and 12 inches of a protective soil layer.

2. The side slopes and the floor of all the Disposal Pits must have at least a 1% slope to allow fluids to drain to the central collection trenches of the Leachate Collection System and the Leak Detection System and then flow to the sump at the low end of each cell.

3. Each disposal cell must be equipped with a Leachate Collection System (LCS), including a HDPE geocomposite drainage layer consisting of two 8-ounce geotextiles on either side of a 200-mil thick geonet that covers the entire pit area on top of the primary liner, as well as a central collection line to aid in the transmittal of fluids to the LCS sump, to collect any rainwater that falls within the pit footprint and leachate that percolates through the waste contained therein. Refer to the “DISPOSAL CELL COLLECTING PIT DETAILS” (Drawing 15) diagram included in Permit Appendix E and the “DISPOSAL CELL EXCAVATION PLAN” (Drawing 11) diagram included in Permit Appendix F.

4. The pits must be equipped with a Leak Detection System (LDS), including a HDPE geocomposite drainage layer consisting of two 8-ounce geotextiles on either side of a 200-mil thick geonet that extends over the entire pit between the primary and secondary liners, as well as a central collection line to aid in the transmittal of fluids to the LDS sump, to collect any leakage from the primary liner. Refer to the “DISPOSAL CELL COLLECTING PIT DETAILS” (Drawing 15) diagram included in Permit Appendix E and the “DISPOSAL CELL EXCAVATION PLAN” (Drawing 11) diagram included in Permit Appendix F.

5. The liners, the LCS and the LDS must be installed in accordance with the application, the material manufacturer’s specifications and sound engineering practices.

**H. A liner anchor trench must be used to key the synthetic liners for each cell to their respective berms. The liners must be welded together to create a continuous liner system when the next disposal pit is constructed.**
I. A permanent liner boundary marker must be installed and maintained on all four sides of the pit that clearly identifies the subsurface liner system weld locations at the land surface.

J. The area surrounding the pits must be graded such that all surfaces slope away from the pits, to prevent surface flow storm water from entering the pits.

K. Unless otherwise required by conditions of this permit, construction, use, and maintenance of each pit must be in accordance with the information represented on the applications (Form H-11’s) and attachments thereto.

IX. DISPOSAL PITS OPERATION (P012384, P012385, P012386 and P012387)

A. Only one Disposal Pit may be considered active and accept oil and gas waste at any time.

B. The permittee must not construct or use any Disposal Pits in a manner that could exceed the financial security required by Permit Condition I.B.

C. All waste shall pass a Paint Filter Test (EPA Method 9095) prior to placement in any Disposal Pit. Test results from each Paint Filter Test must be maintained and provided to the RRC upon request.

D. The Permittee must contact the District Office to proceed with construction of each disposal pit in the sequence and may not begin accepting waste until;

1. The Permittee has received approval from the District Office to begin accepting waste in next Disposal Pit in the sequence.

2. Waste is no longer being accepted in the previous Disposal Pit Phase and the temporary cap is almost completed.

E. Before the Permittee may begin excavation of the next Disposal Pit in the sequence, the previous Disposal Pit must be filled with waste to almost final grade height, and the exposed side abutting the next pit in the construction sequence must be properly graded and prepared to receive waste. The waste in the previous pit must be properly graded and prepared for the temporary cap, which will consist of six (6) inches of soil (not waste) that meets a hydraulic conductivity of 1 x 10^{-7} centimeters per second or less and has been compacted to 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density. The temporary cap must be graded to prevent ponding on top of the cover and inhibit infiltration of liquids into the wastes below.

F. The interim cover must be inspected after each storm event and re-compacted as needed to meet the requirements specified in Permit Condition IX.E.

G. After the interim cover has been constructed it must be inspected every quarter for erosion, slope stability, and thickness of the cover. The results of each inspection must be submitted as part of the Quarterly Report required in Permit Condition I.T. The physical record must be maintained by the permittee for the life of the pit.

H. At least two (2) feet of horizontal freeboard must always be maintained between the edge of waste in the active disposal pit and the top of the pit dikes.
I. Prior to the Disposal Pit accepting waste above grade, the waste collected below grade in each active Disposal Pit Phase must be stabilized, compacted and maintained to prevent collapse of the structure, and must not have side slopes steeper than a one to three (vertical to horizontal) ratio.

J. Once the waste height exceeds 50-feet, the side slopes may not exceed a one-to-four (vertical-to-horizontal) ratio.

K. Once a Disposal Pit Cell begins to accept waste above grade, the pit shall be designed and constructed to include a dedicated contact stormwater collection area to separate and contain all contact stormwater that may be generated during a 25-year, 24-hour storm event for Reagan County.

L. No freestanding fluids may accumulate in any Disposal Pit. Any fluids must be removed within 72 hours of discovery and disposed of in an authorized manner.

M. The contact stormwater collection area must remain free of waste during operations of the active Disposal Pit. Once the Disposal Pit has reached the approximate total capacity, the collection area will be filled with solid waste, and the waste compacted and stabilized, and then the Disposal Pit must be capped and closed according to the criteria specified in the application and Permit Condition XII.

N. The leak detection system must be monitored as required by Permit Condition IV.M. Records of leak detection system monitoring must be submitted in table form within the Quarterly Report required in Permit Condition I.T. The physical record must be maintained by the permittee for the life of the pit. The physical record must be filed with the RRC upon request.

O. If the leak detection system indicates a possible liner system failure, the liner system must be inspected for deterioration and leaks within five days of the detection of the failure. The San Angelo District Office must be notified by phone or email within 24 hours of detection of the failure. No additional waste shall be added to the Disposal Pit in the event of a failure. After inspection, the identified failed component must be replaced or repaired and re-inspected by RRC personnel before resuming use of the pit. A liner system failure is defined as any of the following:

1. A volume withdrawn from the leak detection system that is greater than an Action Leakage Rate (ALR) of 100 gallons per acre day (GPD), as specified below:

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Total Acres</th>
<th>ALR (GPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1 (P012384)</td>
<td>13.5</td>
<td>1,350</td>
</tr>
<tr>
<td>D-2 (P012385)</td>
<td>12.75</td>
<td>1,275</td>
</tr>
<tr>
<td>D-3 (P012386)</td>
<td>12.75</td>
<td>1,275</td>
</tr>
<tr>
<td>D-4 (P012387)</td>
<td>11</td>
<td>1,100</td>
</tr>
</tbody>
</table>

2. Any failure in the leak detection and return system or any component thereof.

3. Any detected damage to or leakage from the secondary liner.
P. Leachate collected in the leachate collection sump must be removed through the leachate removal pipe and disposed of in an authorized manner.

Q. Unless otherwise required by conditions of this permit, construction, use, and maintenance of each pit must be in accordance with the information represented on the applications (Form H-11’s) and attachments thereto.

R. The RRC reserves the right to require necessary design modifications prior to capping and closure to ensure that the waste is stabilized above grade. Prior to receiving waste at every 50-foot interval above grade, a stabilization geotextile may be required to provide increased tensile strength to stabilize the compacted waste.

S. The permittee must notify the San Angelo District Office and technical permitting in Austin each time the waste height exceeds a 50-foot interval.

X. DISPOSAL PITS CLOSURE AND CAPPING (P012384, P012385, P012386 and P012387)

A. Once a disposal cell has achieved its capacity, the cell will be covered with a cap as specified in the application and closed in accordance with construction details shown in the “DISPOSAL CELLS FINAL COVER PLAN” (Drawing 11), the “DRAINAGE STRUCTURES PLAN” (Drawing 3) and the “CLOSURE DRAINAGE DETAILS” (Drawing 4) diagrams received February 26, 2018 and February 4, 2019, which are attached as Permit Appendix H.

B. Once all the Disposal Pits have reached permitted capacity:

1. Waste material in the Disposal Pits must be compacted and stabilized, so that the structure will not fail or erode. The RRC reserves the right to require necessary design modifications to increase tensile strength prior to capping and closure to ensure that the waste is stabilized above grade.

2. Waste material in the Disposal Pit must be graded, stabilized and compacted so that rainwater will not collect on top of the pit.

3. The final cap must consist of a liner subgrade layer 24 inches thick that meets a hydraulic conductivity of 1 x 10-7 cm/sec or less and is compacted to 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density, overlain by a HDPE liner with a thickness of at least 40-mil, overlain by a geocomposite drainage layer with a thickness of at least 200-mil, overlain by a layer of vegetative soil that is at least 18 inches thick, and seeded with appropriate vegetation for the geographic region. Refer to the “DISPOSAL CELL CROSS SECTION” (Drawing 13) included in Permit Appendix G.

4. Unless otherwise required by conditions of this permit, final closure of the Disposal Pit Phases must be consistent with the details as presented in the application. Any modification to the closure or final capping for the Disposal Pit must be submitted and approved by Technical Permitting prior to the modification occurring.
XI. GROUNDWATER MONITORING

A. Seven groundwater monitor wells are to be constructed and installed at the facility. The groundwater monitor wells must be installed and numbered as represented on the “SUBSURFACE INVESTIGATION REPORT MONITOR WELL LOCATIONS” (Figure 8) diagram, received on February 26, 2018, which is attached as Permit Appendix J.

1. The wells must be completed in accordance with 16 TAC Part 4, Chapter 76 (Water Well Drillers and Water Well Pump Installers).

2. The wells must be completed in the shallowest groundwater zone and the completion must isolate that zone from any deeper groundwater zone(s).

3. The screened interval of the wells must be designed to intercept at least five feet of groundwater from the first groundwater-bearing unit.

4. Provisions must be made to protect the well heads from damage by vehicles and heavy equipment.

5. The wells must be maintained in good condition and fitted with a lockable water-tight expansion cap.

6. The groundwater monitoring wells must be able to provide a representative sample of groundwater underlying the site for the duration of facility operations. If a groundwater monitoring well is not capable of providing a representative sample, the permittee must notify Technical Permitting in Austin and install a replacement monitor well that is acceptable to Technical Permitting.

7. The following information must be submitted after the wells are completed:

   a. A soil boring lithological log for each well, with the soils described using the Unified Soil Classification System (equivalent to ASTM D 2487 and ASTM D 2488). The log must also include the method of drilling, well specifications, slot size, riser and slotted screen length, bentonite and cement intervals, total depth, and the top of the first encountered water or saturated soils.

   b. A well installation diagram detailing construction specification, for each well, including riser and screen length, screen slot size, bentonite and cement intervals. The sand pack size should be compatible with the well screen slot size and the local lithology.

   c. A survey elevation for each well head reference point (top of casing) relative to a real or arbitrary on-site benchmark and relative to mean sea level.

   d. A potentiometric surface map showing static water levels, the estimated groundwater flow direction and the calculated groundwater flow gradient.

B. The groundwater monitoring wells must be sampled and monitored for the following parameters after installation and quarterly thereafter:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static Water Level</td>
<td>Feet (ft)</td>
</tr>
<tr>
<td>Total Depth</td>
<td>ft</td>
</tr>
<tr>
<td>pH</td>
<td>s.u.</td>
</tr>
</tbody>
</table>

  *EPA Method 150.1, 150.2, or equivalent*
<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Dissolved Solids (TDS)</td>
<td>mg/L</td>
</tr>
<tr>
<td>160.1 or equivalent</td>
<td></td>
</tr>
<tr>
<td>TPH</td>
<td>mg/L</td>
</tr>
<tr>
<td>TX1005</td>
<td></td>
</tr>
<tr>
<td>Benzene</td>
<td>mg/L</td>
</tr>
<tr>
<td>8260/8021B or equivalent</td>
<td></td>
</tr>
<tr>
<td>Soluble Cations:</td>
<td></td>
</tr>
<tr>
<td>Calcium, Magnesium, Potassium, and Sodium</td>
<td>mg/L</td>
</tr>
<tr>
<td>6010/6020 or equivalent</td>
<td></td>
</tr>
<tr>
<td>Soluble Anions:</td>
<td></td>
</tr>
<tr>
<td>Bromides, Carbonates, Chlorides, Nitrates, and</td>
<td>mg/L</td>
</tr>
<tr>
<td>Sulfates</td>
<td></td>
</tr>
<tr>
<td>300/9056 or equivalent</td>
<td></td>
</tr>
</tbody>
</table>

C. The groundwater quality sampling results specified in Permit Condition XI.B. must be filed with Technical Permitting as part of the Quarterly Report required in Permit Condition I.T. The laboratory analytical reports and the corresponding chain of custody shall be provided for all chemical analyses performed.

XII. STORMWATER MANAGEMENT

A. The general layout and arrangement of the stormwater management structures, which includes noncontact stormwater drainage ditches, rip-rap, culverts, a non-contact stormwater retention pond and drainage diversion channels shall be consistent with the "SURFACE WATER DRAINAGE" (Sheet 1) diagram received on February 26, 2018, which is attached and incorporated into this permit as Permit Appendix I.

B. A perimeter berm that surrounds the entire facility must be constructed and maintained to provide a physical barrier to prevent potential run-on and/or runoff of stormwater. The perimeter berm must be constructed to a minimum height of at least six feet above grade with a slope no steeper than a one to three (vertical to horizontal) ratio and meet the specifications listed in Permit Condition IV.

C. A sluice gate must be installed at the entrance of the culvert that connects the interior ditch of the Disposal Pits to the Stormwater Retention Pond. Construction of the sluice gate must be consistent with the "CLOSURE DRAINAGE DETAILS" (Drawing 4) diagram included in Permit Appendix H. Spills and releases into the interior ditch must be collected and containerized immediately to prevent mixing with noncontact stormwater.

D. Berms and other containment structures must be constructed around all waste management units and storage areas. These structures must be used to divert non-contact stormwater around the waste management areas, and isolate and contain contact stormwater within the waste management units. Spills and releases into the interior ditches must be contained and removed immediately to prevent contact with stormwater.
E. All storage tanks containing fluid waste or fuel must be contained within dikes. Secondary containment of 120% total storage capacity is recommended, however a firewall with capacity that will capture 100% of the volume of the largest tank plus the volume of a 25-year, 24-hour rainfall event for Reagan County is acceptable.

F. Non-contact storm water contained within the perimeter berm must be controlled and diverted around the various waste receiving, collecting, and disposal areas and directed to the Stormwater Retention Pond.

G. Contact stormwater must be prevented from migrating outside of the waste processing and storage areas. The facility must be sloped to facilitate the separation of contact and non-contact stormwater.

H. Contact stormwater must be collected within 24 hours of accessibility and disposed of in an authorized manner.

I. A discharge permit from the EPA may be required for non-contact stormwater discharges. If required, the permit from the EPA must be in place prior to commencement of discharge operations.

J. In the event that contact storm water enters the Storm Water Retention Pond the permittee must submit a written report detailing the event to Technical Permitting in Austin before disposing of the contents of the pond. Contact storm water must be removed and disposed of in an authorized manner.

XIII. FACILITY CLOSURE

A. Technical Permitting and the appropriate District Office must be notified in writing at least 45 days prior to commencement of closure activities. The permittee must submit a closure plan to Technical Permitting in Austin to be reviewed and approved prior to beginning closure activities.

B. At facility closure, all waste, chemicals, and waste related materials must be processed and removed from the facility for authorized reuse or disposed of in an authorized manner.

C. All waste processing equipment, aboveground storage tanks, and any other non-maintenance related equipment must be emptied, cleaned, and removed from the facility.

D. Provisions must be taken to prevent erosion both during and following site closure.

E. All equipment must be dismantled, removed, salvaged, or disposed of in an authorized manner.

F. All liners, pads, tanks, and vaults must be steam-cleaned and demolished, and the generated rubble and wastewater must be disposed of in an authorized manner.

G. All affected or contaminated soils must be removed and disposed of in an authorized manner.

H. Excluding the Disposal Pit and the Non-Contact Stormwater Retention Pond, the entire facility must be backfilled as necessary, contoured to original grade and re-vegetated as appropriate for the geographic region.
I. Closure of the Tank Battery, the Collecting/Washout Pit Area (P012395 and P012396), the Collecting/Receiving Pits (P012389, P012390, and P012391), The Collecting/Drying Pits (P012392, P012393, and P012394) and the Collecting Pit (P012388) shall be as follows:

1. The pits must be dewatered, emptied, demolished, backfilled, compacted, and properly closed. All wastes, including clay or synthetic liners, must be removed and disposed of in an authorized manner.

2. The concrete areas, pits, concrete pads, washout bays and access roads shall be cleaned and demolished, and the concrete rubble and wash-water must be disposed of in an authorized manner. All visually contaminated soils shall be excavated and removed. The contaminated soil must be disposed of in an authorized manner.

3. Once waste removal is completed, a soil sampling plan must be submitted to Technical Permitting to characterize the scope of any residual contamination at the facility. After the removal of wastes, composite soil samples must be taken comprised of a minimum of four representative soil samples per former pit location, and five representative soil samples per acre. Samples must be taken from around and underneath the former Collecting/Washout Pit Area, Collecting/Receiving Pits, Collecting/Drying Pits and Collecting Pit areas.

4. Soil samples must be analyzed for the parameters listed in Permit Condition XIII.I., and the specified limitations must not be exceeded.

J. Soil samples must be analyzed for the following parameters and shall not exceed the specified limitations:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>LIMITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (EPA Method 9045C or equivalent)</td>
<td>6 to 10 standard units</td>
</tr>
<tr>
<td>Electrical Conductivity (EC)¹</td>
<td>≤ 4.0 mmhos/cm</td>
</tr>
<tr>
<td>Total Petroleum Hydrocarbons (TPH) (EPA Method 5035A/TX1005)</td>
<td>≤ 10,000 mg/kg or 1 % by weight</td>
</tr>
<tr>
<td>Total Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) (EPA Method 5035A/8021/8260B)</td>
<td>≤ 30 mg/kg</td>
</tr>
<tr>
<td>Metals (Total) (EPA Method 6010/6020/7471A)</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>≤ 10 mg/kg</td>
</tr>
<tr>
<td>Barium</td>
<td>≤ 10,000 mg/kg</td>
</tr>
<tr>
<td>Cadmium</td>
<td>≤ 10 mg/kg</td>
</tr>
<tr>
<td>Chromium</td>
<td>≤ 100 mg/kg</td>
</tr>
<tr>
<td>Lead</td>
<td>≤ 200 mg/kg</td>
</tr>
</tbody>
</table>

¹ Louisiana Department Natural Resources (LDNR) Lab Procedures for Extraction and Analysis of Exploration and Production (E&P) Waste or equivalent
K. A summary of the soil sampling must include:
   1. A map drawn to scale with coordinates of the sampling locations;
   2. A table indicating the results of the parameters sampled;
   3. The date of sampling;
   4. The approximate depth of the sample below land surface; and
   5. Copies of the laboratory analytical reports and chain of custody.

L. Any soil sample that exceeds the parameter limitations specified in Permit Condition XIII.I. is considered waste and must be disposed of at an authorized disposal facility.

M. Once the results of the closure activities have been approved by the RRC, all pits, excluding the Disposal Pit and Non-Contact Stormwater Retention Pond, must be dewatered, emptied, demolished, backfilled and compacted within 120 days of final cessation of use of each pit. Final surface grading of the pits and the storage tank battery areas must be accomplished in such a manner that rainfall will not collect at these former locations. Upon final closure, the appropriate District Office and Technical Permitting in Austin shall be notified in writing.

XIV. POST-CLOSURE CARE AND MONITORING

A. In accordance with 16 TAC § 3.78 the permittee shall maintain financial security in the amount of $5,827,832.00 after the facility has been closed for the post-closure period monitoring requirements in accordance with this permit. Technical Permitting reserves the right to revise this amount, as necessary. Prior to closure, an updated post-closure period cost estimate must be submitted to Technical Permitting in Austin, and any additional financial security must be filed with and approved by the RRC prior to the operating period financial security referenced in Permit Condition I.B. being released.

B. The site will be monitored for a period of no less than five years after closure of the facility.

C. Any areas showing signs of erosion or instability must be repaired, contoured, backfilled, and reseeded as necessary.

D. Once the facility is no longer in operation, the stormwater must be handled in a manner that is consistent with the information submitted with the application.

E. The LDS and the LCS for the disposal pits must be maintained and monitored quarterly. Any leachate detected must be removed and disposed of in an authorized manner.
F. Post-closure care must include the quarterly inspections of the entire facility by a registered Professional Engineer currently licensed in the state of Texas to identify signs of deterioration, erosion, or failure.

G. A summary of the results of the post-closure monitoring activities must be submitted to Technical Permitting in Austin as part of a Quarterly Report required in Permit Condition I.T.

H. The permittee must request in writing permission to cease post-closure monitoring. Post-closure monitoring requirements may be extended by Technical Permitting based on the monitoring results.

This authorization is granted subject to review and cancellation should investigation show that such authorization is being abused.

APPROVED AND ISSUED ON July 5, 2019

[Tiffany Humberson's signature]

Tiffany Humberson, Manager
Environmental Permits & Support
Technical Permitting

Attachments: Permit Appendices A through J.

Notes:
1. Permit modified to amend the design of the collecting/receiving pits to a dual liner system.
2. Decreased the depth of the disposal pits by five (5) feet below grade.
3. Amended the staging pit design to include a ½ inch steel plate and 6 inches of concrete.

Cc: RRC District 7C, San Angelo
Appendix A

SITE PLAN WITH CROSS SECTIONS

(Drawing 3)
APPENDIX B

Truck Washout Plan (Drawing 5)
Truck Washout Cross Sections (Drawing 6)
Truck Washout Cross Sections (Drawing 6A)
NOTES:
1. THE SECONDARY CONTAMINANT BERM WILL BE CONSTRUCTED FROM CLEAN NATIVE SOIL. MOISTURE CONTENTS MAY BE CONTROLLED IN LITTLE TO PROVIDE A THEATERN berm.
2. WASHING WILL BE PLACED DIRECTLY ON THE GROUND SURFACE WHICH WILL BE PREPARED THE SAME AS THE TANK BERM.
APPENDIX C

Receiving Pits Plan (Drawing 7)
Receiving Pits Sections and Details (Drawing 8)
APPENDIX D

Drying Pads Plan (Drawing 9)

Drawing Pads Cross Sections (Drawing 10)
APPENDIX E
Disposal Cell Collecting Pit Details
(Drawing 15)
Collecting Pit Plan
(Drawing 16)
Collecting Pit Sections
(Drawing 17)
APPENDIX F
Disposal Cell Excavation Plan (Drawing 11)
Cell Sequencing Section (Sheet 2)
APPENDIX G

Disposal Cell 1 Excavation Plan (Drawing 1)
Disposal Cell 1 Interim Cover Plan (Drawing 2)
Disposal Cell 1 Cross Section (Drawing 3)
Disposal Cell 1&2 Excavation Plan (Drawing 4)
Disposal Cell 1&2 Interim Cover Plan (Drawing 5)
Disposal Cell 1&2 Cross Section (Drawing 6)
Disposal Cell 1,2&3 Excavation Plan (Drawing 7)
Disposal Cell 1,2&3 Interim Cover Plan (Drawing 8)
Disposal Cell 1,2&3 Cross Section (Drawing 9)
Disposal Cells 1-4 Excavation Plan (Drawing 10),
Disposal Cells Final Cover Plan (Drawing 11),
Disposal Cell Cross Section
(Drawing 12, Drawing 13, Drawing 14)
APPENDIX H

Disposal Cells Final Cover Plan
(Drawing 11)

Drainage Structures Plan
(Drawing 3)

Closure Drainage Details
(Drawing 4)
APPENDIX I

Surface Water Drainage

(Sheet 1)
APPENDIX J

Subsurface Investigation Report Monitor Well Locations

(Figure 8)