RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

PERMIT TO MAINTAIN AND USE A PIT

Pit Permit No. P012080
AMENDED
Associated with Permit Nos. STF-089, R-9 08-3832, P011308A, B, C, D,
P011426B, P011558, P011563 P011427, P011428,
P011429, P011430, P011431, P011704,
P012315A, B, C, and
P012316A, B, and C

Supercedes permit issued
January 22, 2016
Effective Date October 27, 2016

TERVITA, LLC
10613 W HOUSTON PKWY STE 300
HOUSTON TX 77064

Based on information contained in the application (Form H-11) dated December 30, 2013, the amendment requests received on November 18, 2014, February 25, 2015, October 28, 2015, February 10, 2016 and subsequent information received to date, you are hereby authorized to maintain and use the pit designated herein:

Oil and Gas Solid Waste Disposal Pit
Odessa TRD Facility, Pit Number 12 (74.3 acre footprint)
T. & P. R.R. Co., Block 44, A-1215
Latitude/Longitude: 31.781197°, -102.540786°
Ector County, Texas
RRC District 08, Midland

NARRATIVE DESCRIPTION OF PROCESS:
Incoming oil and gas waste is received into the active Disposal Pit (P012080) after processing from either the Stabilization Pad (P011704), the Water-based Separation Processing Area, or the Oil-based Separation Reclamation Area, or is directed to the Mixing Basins (steel containers) that are located within the footprint of the Disposal Pit and are utilized for further mechanical mixing or the addition of solidification chemicals and aggregates as necessary.
Authority is granted to maintain and use the pit in accordance with Texas Administrative Code (TAC) Title 16, Part 1, Chapter §3.8 (Statewide Rule 8) and subject to the following minimum conditions:

I. GENERAL PERMIT CONDITIONS:

A. The effective date of this permit is October 27, 2016 and will expire on June 30, 2019.

B. In accordance with TAC, Title 16, Part 1, §3.78 (Statewide Rule 78) the permittee shall maintain financial security in the amount of $2,158,035.00 until this Disposal Pit has been closed in accordance with this permit. The financial security is only for Disposal Pit P012080. 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 Railroad Commission of Texas (RRC) prior to making that modification.

C. The permittee may not receive, store, handle, or treat oil and gas waste at the facility until all necessary air permits (if any) are obtained from the Texas Commission on Environmental Quality (TCEQ).

D. Technical Permitting in Austin and the appropriate RRC District Office must be notified in writing each time the construction of a new Phase within the Disposal Pit begins, and when the construction of the Phase is complete. The permittee may not receive, store, handle, or treat oil and gas waste at the facility until the RRC District Office has performed its inspection of the completed Phases and has verified that the facility is constructed in accordance with the application and this permit.

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

F. This permit does not authorize the discharge of any oil and gas waste, including contaminated or contact stormwater from the Disposal Pit.

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

H. Safety Data Sheets (SDS) must be submitted to Technical Permitting in Austin for any chemical or compound 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.

I. 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 chemical laboratory analysis
must be collected and preserved in a manner appropriate for that analytical method and must be consistent with criteria specified in 40 CFR Part 136. All geotechnical testing must be performed by a laboratory certified to conduct geotechnical testing according to the standards specified by ASTM International (ASTM) and approved by a Professional Engineer licensed in the State of Texas.

J. The permittee shall submit a Quarterly Report according to the following:

1. The report shall contain applicable information as required in Conditions III.I., V.E., V.Q. and VIII.E. of this permit.

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 shall be submitted to Technical Permitting in Austin and the appropriate District Office no later than the 31st day of the month following each reporting period, or each April 30th, July 31st, October 31st, and January 31st, respectively.

4. An Executive Summary shall be included in the quarterly reports that describe facility operations and relevant activities that occurred during the specific quarter.

5. Data tables presenting volumes or amounts of treated waste received and interred into the pit shall be included.

6. Data tables presenting analytical results as specified in Permit Conditions III.C., III.D. and III.E. shall be included.

7. The laboratory analytical reports and corresponding chain of custody shall be provided for all chemical analyses performed.

K. 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.

L. This permit is nontransferable without consent of the RRC. Any request for permit transfer must be filed with Technical Permitting in Austin at least 60 days before the permittee wishes the transfer to take place.

M. This 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.

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

O. 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 (6) (E).
II. AUTHORIZED WASTES:

A. Only Resource Conservation and Recovery Act (RCRA) exempt and/or non-hazardous wastes subject to the jurisdiction of the RRC may be received or disposed of in this pit. This permit authorizes the receipt and disposal 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. Iron sulfide, which has been fully oxidized;
4. Contaminated soils from crude oil spills, pipeline and saltwater spills;
5. Absorbent pads from crude oil spills;
6. Formation sands and other solids from saltwater storage tanks or vessels and saltwater pits;
7. Solid waste generated from gas dehydration and sweetening processes (spent filters and filter media, molecular sieves, precipitated amine sludge, iron sponge, and hydrogen sulfide scrubber sludge);
8. Production tank bottoms which do not exceed 7% in oil content as determined by a Standard American Petroleum Institute (API) Shakeout test;
9. Waste solids resulting from crude oil reclamation; and
10. Liners from reserve pits.

B. 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. See Permit Condition III.D.

C. 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.

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

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

F. All waste haulers received at the facility must be permitted Oil and Gas Waste Haulers under the RRC 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. RECORD KEEPING AND TESTING REQUIREMENTS:

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

B. All waste shall pass a Paint Filter Test (EPA Method 9095) prior to interment into a disposal cell. Test results from each Paint Filter Test must be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Condition I.J. of this permit.

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

<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 receipt of waste.

D. Prior to receipt at the site, a representative sample of any RCRA non-exempt waste or any international waste must be analyzed and may not exceed the limit for the following parameters:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>LIMITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosivity</td>
<td>pH 2.0 - 12.5 standard units (s.u.) <em>(EPA Method 1110A, 9040C or equivalent)</em></td>
</tr>
<tr>
<td>Ignitability</td>
<td>Flash Point &lt; 60° C <em>(EPA Method 1010A, 1020B, or 1030A)</em></td>
</tr>
<tr>
<td>Reactivity</td>
<td>No materials exhibiting the characteristic of reactivity as defined by RCRA</td>
</tr>
<tr>
<td>PARAMETER</td>
<td>LIMITATION</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Toxicity</td>
<td>No materials exhibiting the characteristic of toxicity as defined by RCRA</td>
</tr>
<tr>
<td></td>
<td><em>(EPA Method 1311)</em></td>
</tr>
<tr>
<td>Metals: Toxic Characteristic Leaching Procedure (TCLP)</td>
<td><em>(EPA Method 1311/6010/6020/7147A)</em></td>
</tr>
<tr>
<td>Arsenic (As)</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 1.0 mg/L</td>
</tr>
<tr>
<td>Barium (Ba)</td>
<td>&lt; 100.0 mg/L</td>
</tr>
<tr>
<td>Chromium (Cr)</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>&lt; 0.2 mg/L</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>&lt; 1.0 mg/L</td>
</tr>
<tr>
<td>Silver (Ag)</td>
<td>&lt; 5.0 mg/L</td>
</tr>
<tr>
<td>Benzene</td>
<td><em>(EPA Method 1311/8260/8021B)</em> &lt; 0.5 mg/L</td>
</tr>
</tbody>
</table>

E. Each load of incoming waste, other than water based drilling fluid and the associated cuttings, or oil based drilling fluid and the associated cuttings, must be scanned for the presence of NORM using a scintillation meter with a sodium iodide detector. Any load with a maximum reading of 50 microroentgens per hour or more 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 and Radium-228 combined or 150 picocuries per gram of any other radionuclide.

F. Records must be kept of each load of waste received at the facility and interred within Disposal Pit (P012080). The records must include the following:

1. Name of the generator;
2. Source of the waste [Lease Name and Lease Number, Well Number, or Gas I.D. Number or American Petroleum Institute (API) Well Number];
3. Name and RRC permit number of the transporter;
4. Date the waste is received; and
5. Estimated volume of the load.
G. Records must be kept of each load of waste that leaves the facility for disposal, excluding any on-lease injection well. The records must include the following:

1. Date liquid waste is removed from the pit and hauled to an off-site disposal facility;
2. Name and RRC permit number of the carrier;
3. Volume of each shipment of waste hauled to an off-site disposal facility;
4. Type of waste (basic sediment, water, water-based mud, etc.); and
5. Name, authorizing agency and permit number of the facility to which the waste was hauled for disposal.

H. The records required by the conditions specified within this permit must be maintained by the permittee for at least three years from the date the waste was received at the facility. The records must be made available and filed with the RRC upon request.

I. A report of all records required by Permit Condition III.B., III.C, III.D, III.E, III.F, and III.G above, as well as a summary of activities and waste receipts including the volume of each type of waste received on a monthly basis, shall be submitted to Technical Permitting as part of the Quarterly Report required in Condition I.J. of this permit.

IV. GENERAL SITE CONSTRUCTION:

A. The general layout and arrangement of the Odessa TRD Facility shall be consistent with the “SITE PLAN” (Drawing 2) diagram received on July 7, 2016, which is attached to and incorporated into this permit as Permit Appendix A.

B. The general layout and sequencing of the Disposal Pit Phases shall be consistent with the “DISPOSAL PIT EXCAVATION PLAN” (Drawing 4) diagram received July 7, 2016, which is attached to and incorporated into this permit as Permit Appendix B. Disposal Pit P012080 is being expanded from 3,366,234 barrels or 700,000 cubic yards to a final capacity of 45,572,080 barrels or 9,476,612 cubic yards.

C. The general layout and construction of the Disposal Pit Phases, perimeter berms, intermediate berms, liner systems, anchor trenches, noncontact stormwater channels, temporary stormwater retention ponds, and intermediate cover for sequenced Disposal Pit Phases shall be consistent with the “TYPICAL INTERIM DRAINAGE CONDITION PHASE I” (Figure 2.1), “TYPICAL INTERIM DRAINAGE CONDITION PHASE I SECTIONS” (Figure 2.1A), “TYPICAL INTERIM DRAINAGE CONDITION PHASE II” (Figure 2.2), “TYPICAL INTERIM DRAINAGE CONDITION PHASE II SECTIONS” (Figure 2.2A), “TYPICAL INTERIM DRAINAGE CONDITION PHASE III” (Figure 2.3), “TYPICAL INTERIM DRAINAGE CONDITION PHASE III SECTIONS” (Figure 2.3A), “TYPICAL INTERIM DRAINAGE CONDITION PHASE IV”
(Figure 2.4), “TYPICAL INTERIM DRAINAGE CONDITION PHASE IV SECTIONS” (Figure 2.4A), “TYPICAL INTERIM DRAINAGE CONDITION PHASE V” (Figure 2.5) and “TYPICAL INTERIM DRAINAGE CONDITION PHASE V SECTIONS” (Figure 2.5A) diagrams received July 7, 2016, which are attached to and incorporated into this permit as Permit Appendix C.

D. The capacity of the Disposal Pit Phases shall not exceed the volumes or the waste limits heights listed below;

<table>
<thead>
<tr>
<th>Phase No.</th>
<th>Total Volume (bbl)</th>
<th>Total Volume (cu yd)</th>
<th>Height Above Grade (ft)</th>
<th>Depth Below Grade (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>5,010,600</td>
<td>1,041,943</td>
<td>85</td>
<td>35</td>
</tr>
<tr>
<td>Phase 2</td>
<td>5,008,041</td>
<td>1,041,411</td>
<td>95</td>
<td>31</td>
</tr>
<tr>
<td>Phase 3</td>
<td>4,191,380</td>
<td>871,588</td>
<td>91</td>
<td>30</td>
</tr>
<tr>
<td>Phase 4</td>
<td>2,930,722</td>
<td>609,437</td>
<td>92</td>
<td>25</td>
</tr>
<tr>
<td>Phase 5</td>
<td>7,402,349</td>
<td>1,539,302</td>
<td>100</td>
<td>28</td>
</tr>
<tr>
<td>Phase 6</td>
<td>6,929,966</td>
<td>1,441,071</td>
<td>109</td>
<td>20</td>
</tr>
<tr>
<td>Phase 7</td>
<td>6,675,085</td>
<td>1,388,069</td>
<td>110</td>
<td>20</td>
</tr>
<tr>
<td>Phase 8</td>
<td>7,423,937</td>
<td>1,543,791</td>
<td>108</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>45,572,080</td>
<td>9,476,612</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E. Berms or containment structures must be constructed around all waste management units and must be compacted or constructed of material that meets or exceeds 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density. Each berm shall 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 storm water within the waste management units. Refer to the storm water management requirements specified in Permit Conditions VII.

F. Berms must be constructed and maintained on all sides of the Disposal Pit Phases with a slope no steeper than a one to three (vertical to horizontal) ratio on both sides.

1. A perimeter berm with access roads must be constructed on the north, south and west sides of the Disposal Pit Phases that have reached capacity, are under construction, have been constructed, or have been capped with the intermediate cover system. All perimeter berms must meet density requirements specified in Permit Condition IV.E.
2. A temporary containment berm must be constructed on the east side of the Disposal Pit as additional Phases are constructed.

G. A liner anchor trench must be used to key the synthetic liner to the berm. The anchor trench and liner system designs must be consistent with the details shown on the “DISPOSAL PIT LINER DETAILS” (Drawing 7) diagram received on July 7, 2016, which is attached to and incorporated into this permit as Permit Appendix D.

H. The pit liner system must be constructed in accordance with the liner manufacturer installation methods included in the application, and consist of a 60-mil high-density polyethylene (HDPE) secondary (bottom) liner and a 60-mil HPDE primary (top) liner.

I. The liner systems of existing Phases must be tied-in to the next Phase being constructed in order to form a continuous liner system for the entire footprint of the Disposal Pit. All seams and tie-ins must be consistent with the Disposal Pit liner tie-in schematic details shown on the “DISPOSAL PIT LINER DETAILS” (Drawing 8) diagram received July 7, 2016, which is attached to and incorporated into this permit as Permit Appendix E.

J. The floor of the pit must have at least a 2.5% slope to allow fluids to drain to the collection sump located at the topographic low end of each Phase.

K. The pit must be equipped with a leachate collection system (LCS), which includes a geo-composite drainage layer with a thickness of at least 270 mils, leachate trench, perforated leachate collection pipe, and a leachate collection riser. The liner and the leachate collection system profiles and construction design must be consistent with the details shown on Permit Appendix E.

L. Leachate collected in the leachate collection sump must be removed through the pump system and disposed of in an authorized manner.

M. The pit must be equipped with a leak detection system (LDS), including a geo-composite drainage layer with a thickness of at least 270 mils that covers the entire pit between the primary and secondary liners, to collect any leakage from the primary liner. All designs must be consistent with the schematic details shown on the diagrams included in Permit Appendix E.

N. The LCS and the LDS must be installed in accordance with the manufacturer’s specifications and sound engineering practices.

O. A permanent boundary marker surrounding the Disposal Pit must be installed and maintained, and must clearly identify the subsurface location of the liner system boundaries at the surface.

P. A sign must be posted at the Disposal Pit identifying each Phase, and must show the pit name and permit number in letters and numerals at least three inches in height.
V. GENERAL OPERATING REQUIREMENTS:

A. The facility shall 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.

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

C. Before the Permittee may begin excavation of the Disposal Pit Phase 3, the current permitted Disposal Pit Phases 1 and 2 must be filled to final grade, and the Permittee must have received approval from the Midland District Office. Disposal Pit Phase 3 may not begin accepting waste until:
   1. Waste is no longer being accepted in the Disposal Pit Phases 1 and 2,
   2. Compacted intermediate cover has been constructed and closure of the Disposal Pit Phases 1 and 2 has begun, and
   3. The Permittee has received approval from the Midland District Office to begin accepting waste in Disposal Pit Phase 3.

The construction of the successive Disposal Pit Phases (Phase 4 through 8) must progress in the same manner and will require the same approvals from the Midland District Office sequentially.

D. The compacted intermediate cover shall consist of 12 inches of well compacted screened caliche material that is free of debris and rocks greater than 2 inches and other organics. The intermediate cover must be graded to prevent ponding on top of the cover and inhibit infiltration of liquids into the wastes below.

E. After the intermediate 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.J. The physical record must be maintained by the permittee for the life of the pit.

F. Prior to the Disposal Pit accepting waste above grade, the waste collected below grade in the active Disposal Pit Phase must be stabilized and maintained to prevent collapse of the structure, and must not have side slopes steeper than a one to four (vertical to horizontal) ratio.

G. At least two feet of horizontal freeboard must be maintained at all times between the edge of waste in the pit and the top of the pit dikes (as represented in the application).

H. Once the Disposal Pits begins to accept waste above grade, the pit freeboard (buffer) shall be constructed and maintained to contain all contact stormwater that may be generated during a 25-year, 24-hour storm event for Ector County.
I. Mixing Basins (steel containers) may be placed within the Disposal Pit over the liner system, and must have a minimum of three feet of stabilized material between the bottom of the Mixing Basin and the liner system. The top of the Mixing Basins must be one foot above the surrounding wastes at all times.

J. 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.

K. All waste received at the site which does not pass the Paint Filter Test must be processed through the on-site dewatering equipment (i.e.: centrifuges, shakers, mechanical spreaders, and collecting pits) and/or stabilized in the Mixing Basins prior to its placement in the Disposal Pit. The liquid resulting from the dewatering process must be disposed of offsite in an authorized manner.

L. Any spill of waste, treating chemicals, or any other material shall be promptly containerized, and the resulting waste disposed of in an authorized manner.

M. No free oil may be allowed to accumulate on top of the waste stored in the Disposal Pit. Any free oil on top of the waste must be skimmed off and handled in accordance with RRC rules. A Skim Oil/Condensate Report (Form P-18) must be filed for every month in which skim oil is recovered and then subsequently sold during the operation of this facility.

N. No freestanding fluids may accumulate in a disposal cell. Any fluids must be removed within 72 hours of discovery and disposed of in an authorized manner.

O. This permit does not authorize the discharge of any oil and gas waste from the Disposal Pit.

P. The leak detection system must be monitored at least weekly. This record shall include:

1. Date of fluid level measuring;
2. Fluid level;
3. Volume of fluid removed;
4. Electrical conductivity; and
5. Chloride concentration of the fluids removed.

Q. A report of all records required by Permit Conditions V.K. V.N. above, must be submitted in table form within the Quarterly Report required in Permit Condition I.J. The physical record must be maintained by the permittee for the life of the pit.

R. 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 Midland District Office must be notified of that fact 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 leak rate from the primary liner greater than Action Leakage Rate (ALR) of 100 gallons per acre per day (GPAD).

<table>
<thead>
<tr>
<th>Phase No.</th>
<th>Total Acres</th>
<th>ALR(GPAD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>8.9</td>
<td>890</td>
</tr>
<tr>
<td>Phase 2</td>
<td>6.5</td>
<td>650</td>
</tr>
<tr>
<td>Phase 3</td>
<td>6.9</td>
<td>690</td>
</tr>
<tr>
<td>Phase 4</td>
<td>5.2</td>
<td>520</td>
</tr>
<tr>
<td>Phase 5</td>
<td>10.8</td>
<td>1,080</td>
</tr>
<tr>
<td>Phase 6</td>
<td>10.5</td>
<td>1,050</td>
</tr>
<tr>
<td>Phase 7</td>
<td>10.3</td>
<td>1,030</td>
</tr>
<tr>
<td>Phase 8</td>
<td>15.2</td>
<td>1,520</td>
</tr>
<tr>
<td>Total</td>
<td>74.3</td>
<td></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.

S. The permittee must maintain a record of when the leak detection and the liner systems are inspected, and the results of each inspection. This record must be maintained by the permittee for the life of the pit, and made available upon request of the RRC.

VI. GENERAL CAPPING AND CLOSURE REQUIREMENTS:

A. Technical Permitting and the Midland District Office must be notified in writing at least 45 days prior to commencement of closure activities.

B. Once the Disposal Pit has reached its permitted capacity:

1. Waste material in the Disposal Pit must be stabilized, so that the structure will not fail, slump or erode;

2. Waste material in the Disposal Pit must be graded and compacted so that the waste will support the pit cover and rainwater will not collect on top of the pit;
3. The compacted waste must be covered with a cap that consists of an unreinforced (5% slope) geo-synthetic clay liner (GCL) on the top deck and a reinforced (25%) GCL on the side slopes, overlain by a linear low density polyethylene (LLDPE) liner with a thickness of at least 40-mil, overlain with a geo-composite drainage layer with a thickness of at least 200-mil, overlain by a vegetation layer of soil that is 16 inches thick compacted to no more than 90% dry density (ASTM D698), and seeded with appropriate vegetation; and

4. Unless otherwise required by conditions of this permit, final closure of the Disposal Pit and construction of the cap must be consistent with details provided on the “DISPOSAL PIT FINAL COVER PLAN” (Drawing 5), “DISPOSAL PIT CROSS SECTIONS” (Drawing 6) and “DISPOSAL PIT FINAL COVER DETAILS” (Drawing 10) diagrams received July 7, 2016, which are attached to and incorporated into this permit as Permit Appendix F and the details and procedures specified in the permit application.

5. Upon completion of the installation of the final cover, a topographic survey of the Disposal Pit must be completed by a State of Texas certified land surveyor. A topographic map will be required that shows as-built final contours, drainage structures, fences, gates, access roads and all other pertinent site features. A cover thickness schematic must be generated demonstrating the thickness of each layer with coordinates and illustrates the perimeter (extent) of the final cover.

VII. STORMWATER CONTROL

A. A perimeter berm that surrounds each separate Disposal Pit Phase and each accompanying temporary storm water retention pond must be constructed and maintained to provide a physical barrier to prevent potential commingling of contact and non-contact stormwater. Construction must be consistent with the information as represented in the application.

B. The facility must be designed and constructed to contain and isolate contact stormwater and prevent run-on of non-contact stormwater.

C. A discharge permit from the Environmental Protection Agency (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.

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

E. Upon final capping and closure of the Disposal Pit the Stormwater Retention Pond must be constructed and designed to contain a 100-year, 24-hr rainfall event volume for Ector County. A spillway must be installed to provide for the controlled release of non-contact stormwater if the rainfall is in excess of the 100-year event volume.
F. Once the Disposal Pit is no longer in operation the final cover must include the construction, installation and maintenance of the non-contact stormwater structures consistent with the “PROPOSED DRAINAGE STRUCTURE PLAN” (Drawing I-2), “CLOSURE DRAINAGE DETAILS” (Drawing I-3), “DRAINAGE CHANNEL SECTIONS” (Drawing I-4), “STORMWATER POND SECTION” (Drawing I-5), "NORTH PERIMETER CHANNEL PROFILE” (Drawing I-6), “SOUTH PERIMETER CHANNEL PROFILE” (Drawing I-7), “SOUTH CULVERT CROSS SECTIONS” (Drawing I-8), and “NORTH CULVERT CROSS SECTIONS” (Drawing I-9) diagrams received on July 7, 2016, which are attached to and incorporated into this permit as Permit Appendix G.

VIII. POST-CLOSURE CARE AND MONITORING:

A. The Disposal Pit must be monitored for a period of no less than five years after closure of the facility.

B. Post-closure care must include quarterly integrity inspections of the Disposal Pit cap, including all of the drainage features constructed to prevent erosion and channels constructed to convey stormwater, and the Stormwater Retention Pond by a Texas registered Professional Engineer for signs of deterioration.

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

D. The leak detection system and the leachate collection system for the Disposal Pits must be maintained and monitored quarterly. Any leachate detected must be pumped out and disposed of in an authorized manner.

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

F. 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 October 27, 2016

[Signature]

Grant Chambless, P.G.,
Manager
Environmental Permits & Support
Technical Permitting
Attachments:
Permit Appendices A, B, C, D, E, F and G

Cc:

RRC-District 08, Midland
RRC-Reporting Log, Austin
RRC-Production Log, Austin

Notes:

1. The Disposal Pit surface footprint has been expanded from 15.4 acres (Phase 1 and Phase 2) to 74.3 acres (Phase 4 through Phase 8).
2. The Disposal Pit capacity has increased from 3,366,234 barrels or 700,000 cubic yards to 45,572,080 barrels or 9,476,612 cubic yards.
3. Included the EPA methods for the RCRA non-exempt testing.
4. Decreased the financial security (FS) from $2,813,000 to $2,158,035.00. The new largest pit phase is smaller than the previous two phases covered under the FS.
5. Added the Stormwater Section to the permit.
6. Added the Mixing Basins (steel containers) in the operating language. This operational change was approved via email on July 26, 2016. Email in the file.
Permit Appendix A

“SITE PLAN” (Drawing 2)
Permit Appendix B

“DISPOSAL PIT EXCAVATION PLAN” (Drawing 4)
Permit Appendix C

“TYPICAL INTERIM DRAINAGE CONDITION PHASE I” (Figure 2.1),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE I SECTIONS” (Figure 2.1A),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE II” (Figure 2.2),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE II SECTIONS” (Figure 2.2A),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE III” (Figure 2.3),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE III SECTIONS” (Figure 2.3A),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE IV” (Figure 2.4),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE IV SECTIONS” (Figure 2.4A),

“TYPICAL INTERIM DRAINAGE CONDITION PHASE V” (Figure 2.5) and

“TYPICAL INTERIM DRAINAGE CONDITION PHASE V SECTIONS” (Figure 2.5A)
Permit Appendix D

“DISPOSAL PIT LINER DETAILS” (Drawing 7)
Permit Appendix E

“DISPOSAL PIT LINER DETAILS” (Drawing 8)
Permit Appendix F

“DISPOSAL PIT FINAL COVER PLAN” (Drawing 5),
“DISPOSAL PIT CROSS SECTIONS” (Drawing 6) and
“DISPOSAL PIT FINAL COVER DETAILS” (Drawing 10)
Permit Appendix G

"PROPOSED DRAINAGE STRUCTURE PLAN" (Drawing I-2),

"CLOSURE DRAINAGE DETAILS" (Drawing I-3),

"DRAINAGE CHANNEL SECTIONS" (Drawing I-4),

"STORMWATER POND SECTION" (Drawing I-5),

"NORTH PERIMETER CHANNEL PROFILE" (Drawing I-6),

"SOUTH PERIMETER CHANNEL PROFILE" (Drawing I-7),

"SOUTH CULVERT CROSS SECTIONS" (Drawing I-8), and

"NORTH CULVERT CROSS SECTIONS" (Drawing I-9)
NOTES:
1. CHUTE BEHIND MATERIAL SHALL CONSIST OF SOILS COMPACTED TO PROVIDE A FIRM BASE PRIOR TO THE PLACEMENT OF GEOMEMBRANE.
2. CROSS SECTION WILL BE CAPABLE OF SUSTAINING VEGETATIVE GROWTH.
NOTE:
1. EXISTING CONTOURS AND ELEVATIONS DEVELOPED BY METROPOLITAN AERIAL SURVEYS, CO. FROM AERIAL PHOTOGRAPHY FLOWN 02-21-2019.
ELEVATIONS ARE BASED ON NAVD 88 VERTICAL DATUM. GRID SYSTEM IS TIED TO TEXAS STATE PLANE COORDINATE SYSTEM, ZONE 4203 RAS 83.

INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:
1. ADDED EAST CHANNEL INFORMATION.
STORMWATER POND SECTION

NOTE:
EXISTING CONTOURS AND ELEVATIONS DEVELOPED BY METROPOLITAN AERIAL SURVEYS, CO. FROM AERIAL PHOTOGRAPHIC FLOOR 09-01-2015.
ELEVATIONS ARE BASED ON NAVD 88 VERTICAL SYSTEM. ONLY SYSTEM IS
TIED TO TEXAS STATE PLANE COORDINATE SYSTEM, ZONE 4203 NAD 83.

INDICATES REVISION
(SEE LIST OF REVISIONS)

LIST OF REVISIONS
1. REVISED 100-YEAR WATER SURFACE IN POND.
SOUTH CHANNEL

NORTH CHANNEL BANK

0.7% SLOPE

Q = 183 CFS

h = 1.85 ft

ELEVATION (F.T.)

3100
3090
3080
3070
3060
3050
3040

SOUTH CHANNEL BANK

0.09% SLOPE

Q = 153 CFS

h = 1.65 ft

ELEVATION (F.T.)

3100
3090
3080
3070
3060
3050
3040

LEGEND

NORTH/EAST CHANNEL BANK

SOUTH/WEST CHANNEL BANK

CHANNEL FLOWLINE

WATER SURFACE PROFILE

INDICATES REVISION

(SEE LIST OF REVISIONS)

LIST OF REVISIONS:
1. EXTENDED CHANNEL PROFILE AND REVISED HYDRAULIC CALCULATIONS.
2. ADDED EAST CHANNEL INFORMATION.

SOUTH PERIMETER CHANNEL PROFILE

TERVITA, LLC

WEAVER CONSULTANTS GROUP

ODOSSA TRO FACILITY
ECCTOR COUNTY, TEXAS

WWW.WCGRP.COM  DRAWING 1-7