RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

PERMIT TO RECLAIM OILFIELD RELATED HYDROCARBONS

Permit No. R9 08-1514
Effective Date July 14, 2016

PRODUCTION WASTE SOLUTIONS LLC
PO BOX 1074
ANDREWS, TX 79714

Based on information contained in the application (Form R-9) received August 24, 2015, and subsequent information received to date, you are hereby authorized to reclaim oilfield related hydrocarbons designated herein:

Moss Road Reclamation Facility
Latitude, Longitude: 31.79475°, -102.48037°
Ector County, Texas
RRC District 8A, Midland

NARRATIVE DESCRIPTION OF PROCESS

Incoming oil and gas wastes are off-loaded and separated into water, oil, and solid fractions by means of thermal, physical, and chemical processes. The incoming wastes are initially pumped through skimming tanks to extract most of the liquids and separate the solids. The solid wastes separated from the skimming tanks are transferred to the mixing tank for processing then heated and conveyed to a centrifuge to further separate the waste fractions. The liquids from the skimming tank, heater, and centrifuge shall be conveyed to the gun barrel tank to further separate the hydrocarbon fractions. The saltwater fraction is transferred from the gun barrel tank to the water tank for reuse as wash water or disposed of in at an authorized disposal facility. Oil from the gun barrel shall be reclaimed and sold to an authorized crude oil gatherer. All solid wastes settled in the tanks and stored in roll-off boxes shall be transported and disposed of at an authorized waste disposal facility.

Authority is granted to reclaim oilfield related hydrocarbons in accordance with 16 Texas Administrative Code (TAC) §3.57 (Statewide Rule 57) and 16 TAC §3.8 (Statewide Rule 8) and is subject to the following conditions:
I. GENERAL PERMIT CONDITIONS

A. The authority granted by this permit (R9 08-1514) is effective July 14, 2016.

B. The permittee may not receive, store, or handle, oil and gas wastes or fluids at the facility until financial security in the amount of $104,000.00 is provided and approved by the Railroad Commission of Texas (RRC) for the referenced location.

C. The permittee shall maintain financial security in the amount of $104,000.00 until this facility has 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.

D. 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).

E. Technical Permitting in Austin and the appropriate RRC District Office must be notified in writing when construction of the facility begins, and when the facility 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 facility and has verified that the facility is constructed in accordance with the application and this permit. If there are any changes to the facility design during construction, they must be included on the “as-built” drawing(s), to be filed with Technical Permitting in Austin upon completion.

F. Use of the facility is limited to the treatment, processing, or reclamation of tank bottoms and other hydrocarbon wastes generated through activities associated with exploration, development, and production of crude oil and other wastes containing crude oil.

G. The permittee shall not accept waste from a waste hauler unless the waste hauler has an RRC issued waste hauler permit and is authorized to deposit waste at this facility.

H. This permit does not authorize the use of any pits. Any pits or buried tanks must be permitted in accordance with Statewide Rule 8.

I. This permit does not authorize the discharge from the facility of any oil and gas waste, including contaminated storm water.

J. Any soil, media, or other debris contaminated by a spill of waste or any other materials at the facility must be containerized immediately and processed through the facility or disposed of in an authorized manner.

K. Any soil additives, bio-accelerators, or treatment chemicals must be approved by Technical Permitting prior to use at the facility. They must be stored in vessels designed for the safe storage of the particular compound, and these vessels shall be maintained in a leak free condition.
L. Safety Data Sheets (SDS) must be submitted to Technical Permitting in Austin for any chemical or bio-accelerator proposed to be used in the treatment of waste at the facility. Use of the chemical is contingent upon RRC approval. All chemicals must be stored according to the manufacturer’s specifications.

M. 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 registered Professional Engineer.

N. 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: the OSSF waste is not comingle with any other oil and gas waste; 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 the construction, operation, and maintenance of the OSSF complies with all applicable local, county, and state requirements.

O. A copy of the approved site-specific Spill Prevention, Control and Countermeasure (SPCC) Plan must be maintained on-site and made available to RRC staff for review and inspection upon request.

P. The permittee must post a sign at the facility entrance, which must show the facility name and permit number in numerals at least three inches in height.

Q. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the reclamation plant must be in accordance with the information represented on the “Application For Permit To Operate A Reclamation Plant” (Form R-9) provided and incorporated into this permit as Permit Appendix A and attachments thereto.

R. The permittee must make all records required by this permit available for review and copying during normal business hours upon request of RRC personnel.

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

T. This permit is nontransferable without consent of the RRC. Any request for permit transfer must be filed with Technical Permitting in Austin.

U. Failure to comply with any provision of this permit may result in modification, suspension, termination or cancellation of this permit if Technical Permitting determines that the permittee is in violation of the RRC rules.
II. INCOMING AND OUTGOING WASTES

A. AUTHORIZED WASTES

1. Only Resource Conservation and Recovery Act (RCRA) exempt or non-
hazardous wastes subject to the jurisdiction of the RRC may be received or
processed at this facility. This permit authorizes the receipt and reclamation
of only the following oil and gas wastes:

   a. Hydrocarbon storage tank bottoms.
   
   b. Other hydrocarbon wastes, as defined by Statewide Rule 57 (b) (2).

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

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

B. TESTING REQUIREMENTS FOR INCOMING WASTES

1. The operator of the reclamation plant must conduct a shakeout test on all tank
bottoms or other hydrocarbon wastes upon removal from any producing lease
tank, pipeline, storage tank, or other production facility, to determine crude oil
content and lease condensate thereof.

2. The shakeout test shall be conducted in accordance with the most current
American Petroleum Institute (API) or ASTM method.

3. 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 microcuries 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 combined with radium-228 or 150 picocuries per gram
of any other radionuclide.

C. RECORDKEEPING REQUIREMENTS

1. Details of receipts, deliveries and stock on hand must be reported monthly on the
Form R-2, Monthly Report for Reclaiming and Treating Plants. Submit the
original of the Form R-2 report directly to Technical Permitting in Austin and a
copy of the report to the appropriate RRC District Office by the 15th day of the
calendar month following the month by the report. Form R-2 shall be completed
in accordance with Statewide Rule 57.
2. The permittee shall maintain the following records on each load of waste received at the facility for a period of three years from the date of receipt:
   a. Description of the site where the waste was generated, including:
      i. Generator name.
      ii. Lease Name and Lease Number, Well Number or Gas I.D. Number or API Well Number.
      iii. County.
   b. Name and RRC permit number of the transporter.
   c. Date the waste is received.
   d. Volume of the waste material (specify units).

3. The permittee shall maintain the following records on each load of waste removed from the facility for a period of three years from the date of receipt:
   a. Date waste is removed and hauled to a disposal facility.
   b. Name and RRC permit number of the transporter.
   c. Volume of each shipment of waste hauled to a disposal facility.
   d. Type of waste (basic sediment, water, water-based mud, etc.).
   e. Name of the facility to which the waste was hauled to for disposal.

III. RECLAMATION PROCESS

A. Use of the reclamation process is limited to the treatment, processing, or reclamation of tank bottoms and other hydrocarbon wastes generated through activities associated with exploration, development, and production of crude oil and other wastes containing crude oil.

B. The “Application For Permit To Operate A Reclamation Plant” (Form R-9), which is attached as Permit Appendix A, grants authority for the reclaiming of oil field related hydrocarbons and does not cover reclamation of any refined products. Commingling or blending of refined products with crude is not permitted unless written authority is granted by the RRC’s Director of Field Operations following a formal written request for such blending by the reclamation plant operator. Any deliveries made containing products or crude blended with products must be clearly identified on the RRC Form R-2 as “Products” or “Crude Blended with Products.”

C. The removal of tank bottoms or other hydrocarbon wastes from the facility for which a monthly report (Form R-2) is not filed with the RRC must be authorized in writing by the RRC prior to such removal. A written request for such authorization must be sent to Technical Permitting in Austin, and must detail the location, description, estimated volume, and specific origin of the material removed, as well as the name of the reclaimer and intended destination of the material.
D. The receipt of any tank bottoms or other hydrocarbon wastes from outside the State of Texas must be authorized in writing by the RRC prior to such receipt. Written approval from the RRC is not required if another regulatory agency indicates, in the appropriate monthly report, a corresponding delivery of the same material.

E. The reclamation facility must be clearly identified with signs showing the name of the plant operator and permit number in numerals at least three inches in height.

IV. CONSTRUCTION AND GENERAL OPERATIONS

A. The general layout and arrangement of the facility shall be consistent with the “Production Waste Solutions Moss Road Reclamation Facility” schematic received July 14, 2015, which is attached to and incorporated into this permit as Permit Appendix B.

B. The facility is limited to having no more than 7,750 barrels (bbls) or 1,612 cubic yards (cy) of unprocessed and processed oil and gas waste and 24 cy of solids resulting from the reclamation process onsite at any given time.

C. The facility shall consist of the following storage vessels:
   1. Two 1,500-bbl Skimming Tanks.
   2. One 1,500-bbl Mixing Tank.
   3. Three 500-bbl Oil Tanks.
   5. One 750-bbl Water Tank.
   6. One 500-bbl Gun Barrel Tank.
   7. One 24-cy Solids Roll-off Box.

D. No additional equipment may be added without prior written approval by Technical Permitting. A request for any additional equipment must be submitted in writing to Technical Permitting for review.

E. No waste, treated or untreated, may be placed directly on the ground. All untreated and treated waste must be stored in steel tanks or in steel roll-off boxes.

F. All equipment at the facility shall be kept on a concrete pad at least six inches thick with a perimeter metal dike at least three feet high.

G. 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 three to one (horizontal to vertical) ratio, unless constructed of concrete or equivalent material (firewalls). These structures must be used to divert non-contact stormwater around the waste management areas and contain and isolate stormwater within the waste management units.
H. All the storage tanks containing fluid waste shall be contained within dikes. Secondary containment consisting of 120% total capacity is recommended, however a minimum capacity consistent with the EPA rules governing SPCC Plans (40 CFR Part 112), that will capture 100% capacity of the largest tank plus the 25-year / 24-hour rainfall event (for Ector County) is acceptable. 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.

I. A perimeter berm must be constructed to surround the entire facility and must be designed to prevent stormwater run-on and prevent stormwater run-off from the site. The perimeter berm must be constructed to a minimum height of two feet above the land surface with a slope no steeper than a three to one (horizontal to vertical) ratio.

J. All reclamation plant facilities must be clearly identified with signs showing the name of the plant operator and permit number in numerals at least three inches in height.

K. All wastes generated by reclaiming operations shall be disposed of in an authorized manner.

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

M. The facility shall maintain security to prevent unauthorized access. Access shall be maintained 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.

N. Each month an integrity inspection of the entire facility must be performed on all concrete slabs, processing equipment, berms, and aboveground storage tanks for deterioration, leaks and spills. Records of each inspection must be kept on-site and maintained by the permittee, and upon request of the RRC, the records must be submitted to the Technical Permitting. The permittee must maintain the following records for a period of three years from the date of the inspections:

1. 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.

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

3. 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.

O. The permittee must submit a Quarterly Report containing the specified information required in Permit Condition IV.N. to Technical Permitting in Austin no later than the 30th day of the month following each reporting period (January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31), or each January 30, April 30, July 30, and October 30.
V. STORMWATER CONTROL

A. The facility must be designed and constructed to contain contact storm water and prevent run-on of non-contact storm water.

B. 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.

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

D. Non-contact stormwater shall be prevented from entering the waste processing and storage areas. Areas outside of the bermed waste processing and storage areas shall be sloped to prevent non-contact stormwater from contacting waste.

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

F. This permit does not authorize the discharge of any oil and gas waste or any stormwater that has come into contact with oil and gas waste.

VI. FACILITY CLOSURE

A. Technical Permitting in Austin and the appropriate RRC District Office must be notified in writing 60 days prior to commencement of closure activities.

B. All waste, chemicals, or associated waste materials must be processed and removed from the facility for authorized reuse, or disposed of in an authorized manner.

C. All processing equipment, aboveground storage tanks, piping, and any other associated equipment must be removed from the facility.

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

E. After waste removal and site excavations are completed, a minimum of two representative soil samples per acre must be taken to characterize the scope of any contamination at the facility. Samples must also be taken from around berms, storage areas, tanks, and processing equipment and from underneath the concrete pads if demolished. Those samples must be analyzed for the following parameters and not exceed the corresponding constituent limitations:
<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>LIMITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>6 to 10 standard units</td>
</tr>
<tr>
<td><em>EPA Method 9045C or equivalent</em></td>
<td></td>
</tr>
<tr>
<td>Electrical Conductivity (EC)</td>
<td></td>
</tr>
<tr>
<td><em>Louisiana Dept. of Natural Resources</em></td>
<td></td>
</tr>
<tr>
<td><em>Lab Procedures for Analysis of Exploration</em></td>
<td></td>
</tr>
<tr>
<td><em>Waste or equivalent</em></td>
<td></td>
</tr>
<tr>
<td>Total Petroleum Hydrocarbons (TPH)</td>
<td>≤ 4.0 mmhos/cm</td>
</tr>
<tr>
<td><em>EPA Method 5035A/TX1005</em></td>
<td></td>
</tr>
<tr>
<td>Total Benzene, Toluene, Ethylbenzene, Xylenes</td>
<td>≤ 10,000 mg/kg or 1% by weight</td>
</tr>
<tr>
<td><em>BTEX</em></td>
<td></td>
</tr>
<tr>
<td><em>EPA Method 5035A/8021/8260B</em></td>
<td></td>
</tr>
<tr>
<td>Metals (Total)</td>
<td></td>
</tr>
<tr>
<td><em>EPA Method 6010/6020/7471A</em></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>
<tr>
<td>Mercury</td>
<td>≤ 10 mg/kg</td>
</tr>
<tr>
<td>Selenium</td>
<td>≤ 10 mg/kg</td>
</tr>
<tr>
<td>Silver</td>
<td>≤ 200 mg/kg</td>
</tr>
</tbody>
</table>

F. A summary of the soil sampling required by Permit Condition V.E. must be submitted to Technical Permitting upon closure and shall 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.
5. Copies of the laboratory analytical reports and Chain of Custody.

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

H. When acceptable constituent levels have been verified in writing by Technical Permitting, all berms and tank pads must be leveled, and the site must be backfilled with clean fill and restored to natural grade. Topsoil must be contoured and seeded with appropriate vegetation.
I. Final grading of the storage and processing areas must be accomplished in such a manner that rainfall will not collect in the waste processing and storage area locations after closure.

J. Upon final closure, the appropriate RRC District Office and Technical Permitting in Austin shall be notified in writing.

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

APPROVED AND ISSUED ON **July 17, 2016**.

Grant Chambless, P.G., Manager
Environmental Permits and Support
Technical Permitting

Attachments: Permit Appendices A and B

cc: RRC – Midland / 8A
    RRC – Production Audit, Austin
    RRC – EPS Reporting Log, Austin
PERMIT APPENDIX A

Application For Permit To Operate A Reclamation Plant
(Form R9 08-1514)
# Application for Permit to Operate a Reclamation Plant

**Operator Name:** Production Waste Solutions, LLC  
**Address:** PO Box 1074, Andrews, Texas 79714

**Type of Facility:** Permanent

**Purposes of Fluming:**
- [x] New permit for new facility
- [ ] New permit for existing facility
- [ ] Other (specify)

**Location:**
- Travel from Odessa West on I20 to the intersection of I20 and Moss Road, Turn North, Travel 1 mile. Location on East side of Moss Road.

**Description of Fluming Process:** Separation of tank bottom waste

**Materials Transferred:**
- [x] For hire vehicles

**Facility Identification:**
- **Type of Facility:** Salt Water Disposal
- **Operator:** John Nava

**Certification:**
- James Varner, President

**Signature:**
- James Varner, President
- 432-638-9472
- 2015-06-02

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**To be Completed by Railroad Commission Personnel:**

- This permit is valid until cancellation under one of the following conditions:
  1. The above named operator requests cancellation in writing.
  2. The commission cancels the permit after notice and opportunity for hearing because:
     - [ ] The permit holder has been inactive for 12 months or more.
     - [ ] There has been a violation or a violation is threatened of any provision of the permit, the conservation laws of the state, or rules and orders of the commission.

- This permit is non-transferable. The financial assurance filed in support of this application shall be renewed and continued in effect until its conditions have been met or release is authorized by the commission. The facility schematic diagram is to be kept with this permit. Permit and diagram are to be kept at facility.

- **Serial/Registration No.:** 908-154
- **Effective Date:** July 14, 2015

- **Signature of RRC Representative:**
- **Name:** (Type or print)
- **Phone No.:** (Area code) 463-4354

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**All Wastes Generated by Reclaiming Operations Shall Be Disposed of in accordance with Statewide Rules 8, 9, and 46 (Relating to Water Protection, Disposal Wells, and Fluid Injection).**

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**Received:**
- RRC of Texas
- **Date:** Aug 24, 2015
- **Location:** Austin, TX
PERMIT APPENDIX B

Production Waste Solutions
Moss Road Reclamation Facility