PERMIT TO RECEIVE, STORE, HANDLE AND TREAT CERTAIN NON-HAZARDOUS OIL AND GAS WASTES

Permit No. STF-081
P012125, P012293, P012294
R9 08-1409

RIO RESOURCES LLC
3298 FM 1863
BULVERDE TX 78163

Based on information contained in your application received January 30, 2013, and subsequent information received to date, you are hereby authorized to receive, store, handle, and treat certain nonhazardous oil and gas wastes subject to the jurisdiction of the Commission as specified below at the following facility:

Stationary Commercial Fluid Recycling Facility
Approx. 5.02 Acres of Section 31, Block 40 T1S, T&S
T&P RR CO Survey, A-256
Latitude and Longitude: 31.985290°, -102.252710°
Midland County, Texas
RRC District 08, Midland

NARRATIVE DESCRIPTION OF PROCESS:

Incoming waste is offloaded into three Receiving Pits. The contents of the Receiving Pits will be pumped through clarifying tanks for oil and water separation. Separated oil will be pumped into a dedicated Oil Tank. The remaining liquids will be pumped to an Aeration Tank where they are aerated for biological waste stabilizing and treatment. Aeration Tank water is then filtered, heated, and disinfected. Filtrated water is stored in one of the ten Water Storage Tanks to be sold for off-site reuse.

Authority is granted 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. This permit is effective May 22, 2015, and expires May 21, 2020.
B. The permittee shall maintain financial security in the amount $101,600 for Permit No. STF-081 of the Midland Co – SRS Enstrada Commercial STF Facility 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 Commission prior to making that modification.

C. 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, or treating oil and gas waste until the 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.

D. No waste may be received at the referenced facility until completion of facility construction and a Spill Prevention, Control and Countermeasure (SPCC) Plan is provided to and approved by Technical Permitting. A copy of the approved SPCC Plan must be maintained on-site and made available for review and inspection.

E. The permittee may not begin receiving, storing, handling, or treating oil and gas waste at the facility until any necessary air permits or exemptions are obtained from the Texas Commission on Environmental Quality.

F. The facility is limited to having no more than 6,200 bbls of unprocessed and processed oil and gas waste and 30 cubic yards of solids resulting from the reclamation process stockpiled onsite at any given time.

G. A discharge permit from the Environmental Protection Agency (EPA) may be required for non-contact storm water discharges. If required, the permit from the EPA must be in place prior to commencement of discharge operations.

H. The permittee must make all records available for review and copying during normal business hours upon request of Commission personnel.

I. All laboratory analyses required to be performed in accordance with this permit must be performed using appropriate EPA or Standard Methods by an independent National Environmental Laboratory Accreditation Program (NELAP) certified laboratory neither owned nor operated by the permittee.

J. Material Safety Data Sheets must be submitted to Technical Permitting in Austin for any chemical proposed to be used in the treatment of waste at the facility. Use of the chemical is contingent on Commission approval.

K. The permittee must submit a Quarterly Report containing the applicable information required in Conditions II.B. and III. of this permit. The first Quarterly Report must cover the period beginning on the effective date of the permit and ending June 30, 2015. The reporting periods must thereafter 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.
L. The Quarterly 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 30, July 30, October 30, and January 30, respectively.

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

N. All waste haulers received at the facility must be Commission permitted 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).

O. 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 Commission if: the OSSF waste is not commingled 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.

P. Details of receipts, deliveries and stock on hand must be reported monthly on the Form R-2, Monthly Report for Reclaiming and Treating Plants. Skimmed oil and condensate collected outside of a Reclamation Plant shall be included on the Form R-2.

Q. This permit may be considered for administrative renewal upon request and subsequent review by the Commission. Any request for permit renewal must be received by Technical Permitting in Austin within 60 days of the expiration of this permit.

R. This permit is **nontransferable** without the written approval of the Commission. Any request for permit transfer should be filed with Technical Permitting in Austin.

S. Unless otherwise dictated by this permit, construction and operation of the facility must be as represented in the original application and subsequent information received to date by Technical Permitting in Austin. Any deviation from the permit must be approved by amendment from Technical Permitting in Austin before implementation.

T. Failure to comply with any provision of this permit or determination by the Commission that this permit is being abused will be cause for enforcement action including, but not limited to, assessing an administrative penalty, and modification, suspension, or termination of this permit.

II. **INCOMING WASTES**

A. **AUTHORIZED WASTES**

1. Only the following Resource Conservation and Recovery Act (RCRA)-exempt or non-hazardous wastes subject to the jurisdiction of the Railroad Commission of Texas (RRC) may be received or processed at this facility:
a. Produced formation water,
b. Produced hydraulic fracturing fluid,
c. Well bore fluids,
d. Drilling mud,
e. Tank bottoms,
f. Contact storm water, and

g. Waste water from the washout of permitted oil and gas waste haulers.

2. RCRA non-exempt wastes under the jurisdiction of the Commission may be accepted and processed at the facility if analytical results demonstrate that the waste is characteristically non-hazardous.

3. No oil and gas Naturally Occurring Radioactive Material (NORM) waste, as defined in 16 TAC §4.603, 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 this facility.

4. Waste may only be received at the facility if it is a waste under the jurisdiction of the Railroad Commission of Texas. No hazardous waste as defined by the U.S. Environmental Protection Agency in 40 CFR Part 261 or industrial waste may be received at the facility.

B. TESTING REQUIREMENTS FOR INCOMING WASTES

1. Prior to receipt at the site, representative samples of waste from commercial oil and gas facilities must be analyzed and may not exceed the limit for the following parameter:

   PARAMETER                        LIMITATION
   Total Organic Halides (TOX)      100 mg/kg
   EPA Method 9020B

2. 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 well, pit, spill location.)

3. Each load of incoming waste, other than water base drilling fluid and the associated cuttings, or oil base 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 Radium-226 combined with Radium-228, or 150 picocuries per gram of any other radionuclide.
III. RECORDKEEPING REQUIREMENTS

A. The permittee must maintain the following records on each load of waste received at the facility for a period of three 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, or gas ID, or API Well Number; and
   c. County;

2. Name of transporter;

3. Volume of waste material (barrels); and

4. A description of the type of waste material, including:
   a. Fluid-to-Solid ratio; and
   b. Detailed description of the type of waste including any analysis required by Condition II.B.

B. The permittee must maintain the following records on each load of outgoing waste sent from the referenced facility to an authorized disposal facility for a period of three years from the date of shipment:

1. Description of the facility to where the waste is sent for disposal, including:
   a. Disposal operator name;
   b. Disposal permit number; and
   c. County;

2. Name of transporter;

3. Volume of waste material (barrels); and

4. A detailed description of the type of waste material.

C. The permittee must maintain the following records for a period of three years from the date of the monthly inspection as required by Condition IV.K.:

1. The results of the monthly inspection of concrete structures 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 of process equipment, tanks, and roll-off boxes, and a description of corrective action taken, if any.

D. A report of all records required by Conditions III.A., III.B., and III.C. above, as well as a summary of waste receipts including the cumulative volume of each type of material received and cumulative volume of each type of waste that leaves the facility for disposal on a monthly basis must be submitted to Technical Permitting in Austin.
and the appropriate District Office as part of the Quarterly Report required in Condition I.K. of this permit.

IV. GENERAL SITE CONSTRUCTION AND MAINTENANCE

A. A sign must be posted at each entrance to the facility showing the operator name, facility name, and permit number in letters and numerals at least three-inches in height.

B. The facility must consist of the following storage vessels and areas:
   a) Three 150-bbl Receiving Pits (P012125, P012293, P012294);
   b) Two 325-bbl D-Claire Tanks;
   c) One 500-bbl Oil Tank;
   d) Ten 400-bbl Filtrate Tanks;
   e) One 600-bbl Aeration Tank;

C. Layout of the storage vessels and areas has to be consistent with the Facility Site Plan (Appendix A).

D. A perimeter berm at least 6 inches high must be constructed to surround the entire facility and must be designed to prevent storm water run-on and prevent storm water runoff from the site. The perimeter berm must be constructed to a minimum height of at least four feet with a minimum 1:3 slope (vertical to horizontal) ratio.

E. No additional storage vessels may be added to the site without prior approval by Technical Permitting. A request for any additional storage vessels must be submitted in writing to Technical Permitting for review. Any pits or buried tanks must be permitted in accordance with Statewide Rule 8.

F. No waste may be placed on the ground or on any concrete slab at the facility, unless it is permitted as a pit. All waste must be stored in aboveground storage tanks, steel roll-off boxes or permitted pits.

G. All reclaimed and skimmed oil must be stored in the 500-bbl Oil Tank until sold.

H. All storage, tanks, and roll-off boxes must be maintained in a leak-free condition.

I. Any spill of waste, chemical, or any other material must be collected and cleaned up within 24 hours, and disposed of in an authorized manner.

J. The perimeter of the property must be enclosed with a 6 foot high security fence suitable to keep out unauthorized access. The site is to be attended continuously or secured when unattended. Access gates must be closed and locked when not attended by facility personnel.

K. A monthly inspection of the facility and all equipment and storage on site must be performed. Records of each inspection must be kept on site and submitted to Technical Permitting in accordance with Condition III.C. of this permit.
L. Any waste treated or untreated received at the facility must be deposited in the Collecting Pit or leave the facility within 90 days of receipt for disposal at an authorized oil and gas waste disposal facility. Skim oil may be stored at the facility until the total volume reaches 500 barrels.

M. Tanks must be located within a secondary containment structure made of 29 millimeter steel with walls at least 12 inches above grade.

N. No waste, or waste-related materials may be located in flood prone areas of the facility.

V. RECLAMATION PLANT (R9 08-1409)

A. Use of the plant 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 R-9 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 Commission’s Director of field operations after written requests for such blending by the reclamation plant operator. Any deliveries made containing products or crude blended with products must be clearly identified on the Commission 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 monthly reports are not filed with the Commission must be authorized in writing by the Commission 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 reclamer and intended destination of the material.

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

E. 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.

F. 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.

G. The shakeout test shall be conducted in accordance with the most current American Petroleum Institute or American Society for Testing Materials method.

H. A Material Safety Data Sheet (MSDS) must be submitted to Technical Permitting in Austin for any chemical proposed to be used in the treatment of waste at this
facility. Use of the chemical is contingent on RRC approval and must be stored in a vessel compatible with and designated for storage of the particular chemical. The storage vessel must be maintained in a leak free condition.

VI. RECEIVING PITS (P012125, P012293, P012294)

A. The capacity of each of the pits must not exceed 150 barrels.

B. At least 2 feet of freeboard must be maintained between the fluid level in the pits and the land surface.

C. The land surface must be graded such that all surfaces slope away from the pits so as to eliminate any surface flow stormwater from entering the pit.

D. The pits must be lined with reinforced concrete with a thickness of at least 6 inches.

E. If evidence of a leak exists, the permittee must empty the pits and inspect the concrete surface within seven days of the detected leak. The appropriate District Office must be notified at least 48 hours before each inspection.

F. The pit must be emptied and visually inspected annually for deterioration and leaks. A record of this inspection and photographs of the interior of the pit must be maintained and available upon request of the RRC. The appropriate District Office must be notified by phone or email at least 48 hours before emptying the pit for inspection.

G. No oil may be allowed to accumulate on top of the water or wastes stored in the pit. Any oil on top of the water 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.

H. Three groundwater monitor wells must be installed and numbered as represented on the Facility Site Plan (Appendix A).

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

2. The wells must be completed and penetrate the shallowest groundwater zone, and the completion must isolate that zone from any deeper groundwater zone.

3. The screened interval of the wells must be designed to intercept at least five feet of groundwater.

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

5. The wells must be water tight at the surface and fitted with a lockable water tight expansion cap.

6. The following information must be submitted after the wells are completed:
i. A soil boring lithologic log for the well, with the soils described using the Unified Soil Classification System (equivalent to ASTM D 2487 and 2488). The log must also include the method of drilling, well specifications, slot size, riser and screen length, bentonite and cement intervals, total depth, and the top of the first encountered water or saturated soils. The sand pack size should be compatible with well screen and slot size, as well as the local lithology.

ii. A well installation diagram detailing construction specifications for each well.

iii. A survey elevation for each well head reference point.

iv. A potentiometric contour map showing static water levels and the estimated direction of groundwater flow and the calculated gradient.

I. The monitor wells must be sampled or monitored for the following parameters after installation and quarterly thereafter:

a. Static water level
b. Benzene
c. Total Petroleum Hydrocarbon (TPH)
d. Total Dissolved Solid (TDS)
e. Chlorides
f. Bromides
g. Sulfates
h. Nitrates
i. Carbonates
j. Calcium
k. Magnesium
l. Sodium
m. Potassium

J. A sign must be posted at the pit, which must show the pit permit number in numerals at least three inches in height.

VII. STORMWATER CONTROL

A. The facility must be designed and constructed to prohibit discharge of contact storm water and run-on of non-contact storm water and must be detailed within and Stormwater Pollution Prevention Plan (SWPPP) to be submitted to the RRC prior to any waste being received at the facility.

B. Contact storm water designated areas of the facility must be sloped inwardly and away from non-contact storm water designated areas to facilitate collection of contact storm water.

C. The non-contact storm water designated areas outside of the facility must be sloped away from the contact storm water designated areas.

D. Contact storm water designated areas of the facility must be collected and cleaned up within 24 hours, and disposed of in an authorized manner.

E. This permit does not authorize the discharge of any oil and gas waste or any storm water that has come into contact with oil and gas waste.
F. A discharge permit from the EPA may be required for non-contact storm water discharges. If required, the permit from the EPA must be in place prior to commencement of discharge operations.

VIII. CLOSURE OF THE SITE

A. Technical Permitting and the appropriate District Office must be notified in writing at least 45 days prior to commencement of any closure activity so that the Commission can monitor closure to assure compliance with the closure plan. Unless otherwise dictated by this permit, closure activities must be performed in accordance with the information contained in the original application and subsequent information received to date.

B. Closure of the facility must proceed as follows:

1. All waste must be processed through the facility and disposed of in an authorized manner. No waste may be permanently disposed of at this facility at any time.

2. The contents of all containment areas, tanks, vessels, or other containers must be decontaminated and disposed of in an authorized manner.

3. All treatment and storage equipment must be removed and salvaged, if possible, or disposed of in an authorized manner.

4. At the time of notification of closure and prior to sampling, a soil sampling plan must be submitted to Technical Permitting in Austin for approval.

5. Soil grab samples must be collected from any area where any contamination may have occurred (i.e., any discolored, odorous, or otherwise conspicuous soil or media) and analyzed for any constituents of concern.

6. After waste removal and site excavation are completed, at least six representative soil grab samples must be obtained from the first two feet of soil from underneath the Washout Pit, Collecting Pit, and Separation Area. These samples must be analyzed and the following constituent levels must not be exceeded:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>CLOSURE LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>6.0 to 10.0 standard units</td>
</tr>
<tr>
<td>EPA Method 9045C</td>
<td></td>
</tr>
<tr>
<td>Electrical Conductivity (EC)</td>
<td>(\leq 4.0) mmhos/cm</td>
</tr>
<tr>
<td>Louisiana Dept. of Natural Resources Lab Procedures for Analysis of E&amp;P Waste or equivalent</td>
<td></td>
</tr>
<tr>
<td>TPH</td>
<td>(\leq 10,000) mg/kg</td>
</tr>
<tr>
<td>Method TX1005</td>
<td></td>
</tr>
<tr>
<td>Total Benzene, Ethylbenzene, Toluene, and Xylene (BTEX)</td>
<td>(\leq 30.0) mg/kg</td>
</tr>
<tr>
<td>EPA Method 8021/8260B</td>
<td></td>
</tr>
</tbody>
</table>
Metals (total):

EPA Method 6010/6020/7471A

<table>
<thead>
<tr>
<th>Metal</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>≤ 10.0 mg/kg</td>
</tr>
<tr>
<td>Barium</td>
<td>≤ 10,000 mg/kg</td>
</tr>
<tr>
<td>Cadmium</td>
<td>≤ 10.0 mg/kg</td>
</tr>
<tr>
<td>Chromium</td>
<td>≤ 100.0 mg/kg</td>
</tr>
<tr>
<td>Lead</td>
<td>≤ 200 mg/kg</td>
</tr>
<tr>
<td>Mercury</td>
<td>≤ 10.0 mg/kg</td>
</tr>
<tr>
<td>Selenium</td>
<td>≤ 10.0 mg/kg</td>
</tr>
<tr>
<td>Silver</td>
<td>≤ 200 mg/kg</td>
</tr>
</tbody>
</table>

7. An executive summary detailing closure activates as well as a table of the soil sample analytical metals and results along with a map showing the sampling locations with latitude-longitude coordinates and copies of the Laboratory Analytical Results and Chain of Custody required by Condition VIII.B.5. and VIII.B.6 must be submitted to Technical Permitting in Austin. When acceptable constituent levels have been verified in writing by Technical Permitting, all earthen berms must be leveled to grade. Topsoil must then be contoured and seeded with appropriate vegetation.

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

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

APPROVED AND ISSUED ON May 22, 2015.

Grant Chamblee, P.G., Manager
Environmental Permits & Support
Technical Permitting

cc: RRC District Office 08, Midland
RRC Production Audit, Austin
RRC Reporting Log, Austin