RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

PERMIT TO RECLAIM OILFIELD RELATED HYDROCARBONS

Permit No. R9 08-1816

BLACKLION ENVIRONMENTAL, LLC
1406 CAMP CRAFT ROAD, SUITE 107
AUSTIN TX 78746

Based on information contained in the application received December 19, 2019, and subsequent information received to date, you are hereby authorized to store, handle, treat and reclaim oilfield related hydrocarbons as designated herein:

Permit to Reclaim Oilfield Related Hydrocarbons
Blacklion Odessa Reclamation Facility
Latitude/Longitude: 31.840674°, -102.541360°
Ector County, Texas
RRC District 08, Midland

NARRATIVE DESCRIPTION OF PROCESS:

Incoming waste will be received through a closed conduit system connected directly to two horizontal mixing tanks. Fluids off-loaded from the trucks will be stored and agitated in these tanks prior to being pumped to the separation equipment, where the waste will undergo thermal, chemical and physical separation. The separated oil is piped to storage tanks prior to being sold. The separated fluids and solids will be containerized prior to off-site disposal at an authorized facility.

Authority is granted by the Railroad Commission of Texas (RRC) to store, handle, treat and reclaim certain nonhazardous oil and gas wastes and reclaim oilfield related hydrocarbons in accordance with Texas Administrative Code (TAC) Title 16, Part 1, Chapter §3.57 (Statewide Rule 57) and is subject to the following minimum conditions:

I. General Permit Conditions

A. This authority granted by this permit is effective March 17, 2020.

B. The permittee may not receive, store, handle, treat, reclaim or dispose of oil and gas wastes at the facility until financial security in the amount of $56,082.00 is provided and approved by the RRC for the referenced location. This amount
provides financial security for the RRC permitted waste storage and treatment units as specified in this permit.

C. In accordance with TAC, Title 16, Part 1, §3.78 (Statewide Rule 78) the permittee must maintain financial security in the amount of $56,082.00 until this reclamation plant 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 addition financial security must be filed with and approved by the RRC prior to making that modification.

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

E. A copy of the site-specific Spill Prevention and 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 permittee may not receive, store, handle or treat oil and gas waste at the facility until all necessary permits (if any) are obtained from the Texas Commission on Environmental Quality (TCEQ).

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

H. Unless otherwise required by conditions of this permit, construction, use and maintenance of the facility must be in accordance with the information represented on the “Application for Permit to Operate a Reclamation Plant” (Form R-9) attached as Permit Appendix A and attachments thereto. Authority is granted for the active reclaiming of oil field related hydrocarbons and does not cover reclamation of any refined products. Commingling or blending of refined products with crude oil or condensate is not permitted unless written authority is granted following a formal written request for such blending by the Reclamation Plant operator. Any deliveries made containing refined products or crude blended with refined products must be clearly identified on the RRC Form R-2 as “Products” or “Crude Blended with Products.”

I. 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.

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

K. 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 chemical is contingent upon RRC approval. All chemicals must be stored according to the manufacturer’s specifications.

L. 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.

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

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

O. The permit to operate a reclamation plant shall remain in effect until canceled at the request of the operator, the permitted facility has been inactive for 12 months, or there has been a violation, or a violation is threatened, of any provision of the permit, the conservation laws of the state, or rules or orders of Statewide Rule 57 (c)(7).

P. The Reclamation Plant permit is nontransferable by Statewide Rule 57 (c)(9). A new permit must be obtained by the new operator.

Q. The permittee must submit a Quarterly Report according to the following:
   1. The report must contain applicable information as required in Permit Conditions III.H. and IV.P.
   2. The quarterly reporting periods must be January 1 through March 30, April 1 through June 30, July 1 through September 30, and October 1 through December 31 of each year.
   3. The Quarterly Reports must be submitted to Technical Permitting 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 must be included that describes facility operations and relevant activities that occurred during the specific quarter.

R. 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 RRC rules.

II. Authorized Wastes

A. Only oil and gas wastes subject to the jurisdiction of the RRC that are nonhazardous or exempt from Subtitle C (Resource Conservation and Recovery
Act (RCRA)), may be received or processed at this facility. This permit authorizes the receipt of only the following oil and gas wastes:

1. Tank bottoms

2. Other hydrocarbon wastes as defined by Statewide Rule 57(b) (2)

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

C. Use of the Reclamation 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.

D. No oil and gas Naturally Occurring Radioactive Material (NORM) waste as defined in 16 TAC, Part 1, §4.603, or waste from a facility that is licensed by the Texas Department of State Health Services to handle, process or treat oil and gas NORM waste, may be received at this facility.

E. 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.

F. The receipt of any tank bottoms or other hydrocarbons wastes from outside the State of Texas must be authorized in writing by the RRC prior to such receipt. Written approval is not required if another regulatory entity with jurisdiction over the waste will indicate, in the appropriate monthly report, a corresponding delivery of the same material.

G. The removal of tank bottoms or other hydrocarbon wastes from the facility for which monthly reports are 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 reclamer and intended destination of the material.

H. All waste haulers received at the facility must be RRC permitted Oil and Gas Waste Haulers and must have the subject facility listed as an approved 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 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 complies 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. 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. Current calibration records of all NORM screening devices must be maintained on-site and made available to RRC personnel upon request.

C. The operator of the Reclamation Plant must conduct a shakeout test on all tank bottoms and 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. The shakeout test must be conducted in accordance with the most current American Petroleum Institute (API) or ASTM International method.

D. 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 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>(EPA Method 9020B)</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>(EPA Method 9023)</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 the waste.

E. Details of receipts of deliveries for incoming waste to be processed at the Reclamation Plant and the stock on hand (available for re-sale) must be reported monthly on the Form R-2, "Monthly Report for Reclaiming and Treating Plants". Submit the original Form R-2 directly to Technical Permitting in Austin and a copy of the report to the appropriate District Office by the 15th day of the calendar month following the month of the report. Form R-2 must be completed in accordance with Statewide Rule 57.

F. 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 the 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)

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

G. The permittee must maintain the following records on each load of waste removed at 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.)

5. Name and permit number of the disposal facility

H. 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.Q. and must 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.F.1.a, III.F.1.b., and III.F.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.  Reclamation Plant Construction and Operation

A. The general layout and arrangement of the facility must be consistent with the "Facility Schematic Diagram" and the "Process & Treatment Area Diagram" schematics, received on February 3, 2020, which are attached as Permit Appendix B.

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

C. Prior to beginning operations, the facility must have procedures in place to prevent unauthorized access. Access must be maintained by a 24-hour attendant or a six-foot-high security fence and a locked gate when the facility is unattended. Fencing shall be required unless terrain or vegetation prevents vehicles or livestock access except through entrances with lockable gates.

D. The facility must consist of the following waste management units and designations:

1. Two (2) 400-bbl mixing tanks
2. One (1) 10-bbl oil buffer tank
3. Four (4) 350-bbl sludge tanks
4. One (1) 400-bbl oil sales tank
5. One (1) 400-bbl water storage tank
6. One (1) 392-bbl solids 3-sided bin

E. The reclamation facility and the tanks listed above are limited to having no more than 3,402 bbl of unprocessed and processed oil and gas waste from the reclamation process onsite at any given time.

F. The tank battery must be surrounded by berms a minimum of three feet high which must maintain a slope no steeper than a one to three (vertical to horizontal) ratio. The construction must be consistent with the "Secondary Containment Diagram" diagram, received on February 3, 2020, which is attached as Permit Appendix C.

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

H. All wastes generate by reclaiming operations must be disposed of in an authorized manner.

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

J. Any spill of waste, treatment chemicals, or any other waste related material must be collected and containerized within 24 hours and processed through the treatment process or disposed of in an authorized manner.
K. Any chemical used in the treatment process must be stored in vessels designed for the safe storage of the particular compound and these vessels must be maintained in a leak free condition.

L. 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 nor leaks, the tank must be repaired before resuming use of the tank.

M. 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 $1 \times 10^{-7} \text{ cm/sec}$ 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.

N. Each month an inspection of the entire facility must be performed on all concrete slabs, firewalls, processing equipment, berms, and above ground storage tanks for deterioration, leaks and spills. 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 records must be submitted as part of the Quarterly Report required by Permit Condition I.Q. of this permit.

1. The results of the monthly inspection of liners, berms and firewalls within the facility for evidence of deterioration, leakage or stormwater run-on, and a description of the 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 the 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 the corrective action taken, if any

V. **Stormwater Management**

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

B. 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.

C. 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 capacity that will capture 100% of the volume of the largest tank plus the volume of a 25-year, 24-hour rainfall event for Ector County is acceptable.
D. Any stormwater than has accumulated within the firewalls for storage tanks or within any pit will be considered contact stormwater. Contact stormwater must be collected and containerized within 24 hours and disposed of in an authorized manner or used in the treatment process.

E. 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.

VI. 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 closure activities beginning.

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

C. Processing equipment, aboveground storage tanks and associated piping, and any other relevant equipment must be removed from the facility in an authorized manner.

D. All liners must be demolished and removed for off-site disposal at an authorized facility.

E. The entire facility must be contoured and backfilled as necessary to original grade and re-vegetated as needed.

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

G. 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 number of samples that is representative of acreage and number of former waste management units. Samples must be taken from around and underneath the former Reclamation Plant Area. These soil samples must be analyzed for the parameters listed in Permit Condition VI.H. Additional soil must be removed in any area where the parameters limitations have been exceeded.

H. All soil samples must be analyzed for the following parameters and must not exceed the specified 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>(EPA Method 9045C)</td>
<td></td>
</tr>
<tr>
<td>Electrical Conductivity (EC)(^1)</td>
<td>(\leq 4.0 \text{ mhos/cm} )</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
PARAMETER                                    LIMITATION

Total Petroleum Hydrocarbons (TPH)          \( \leq 10,000 \, \text{mg/kg or } \\
(\textit{EPA Method 5035A/TX1005})          \quad 1\% \text{ by weight} \\

Total Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)  \( \leq 30 \, \text{mg/kg} \\
(\textit{EPA Method 5035A/8021/8260B})

Metals (Total)                               \( \leq 10 \, \text{mg/kg} \\
(\textit{EPA Method 6010/6020/7471A})

Asbestos                                      \( \leq 10,000 \, \text{mg/kg} \\
Barium                                        \( \leq 10 \, \text{mg/kg} \\
Cadmium                                       \( \leq 100 \, \text{mg/kg} \\
Chromium                                      \( \leq 200 \, \text{mg/kg} \\
Lead                                          \( \leq 10 \, \text{mg/kg} \\
Mercury                                       \( \leq 10 \, \text{mg/kg} \\
Selenium                                      \( \leq 200 \, \text{mg/kg} \\
Silver                                        \\

I. A summary of the soil sampling required by Permit Condition VI.G. 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.

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

K. Once the results of the closure activities have been approved by the RRC the final surface grading of the facility must be accomplished in such a manner that rainfall will not collect at these locations. Upon final closure, the appropriate District Office and Technical Permitting in Austin must 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 March 17, 2020

Tiffany Humberson, Manager
Environmental Permits & Support
Technical Permitting

Attachments: Appendices A, C and B

CC: RRC District 08, Midland
Reporting Log, Austin
PERMIT APPENDIX A

APPLICATION FOR PERMIT TO OPERATE A RECLAMATION PLANT
(FORM R-9)
APPLICATION FOR PERMIT TO OPERATE
A RECLAMATION PLANT

READ INSTRUCTIONS ON BACK

FACILITY NAME: Blacklion Environmental, LLC

1406 Camp Craft Road, Suite 107
West Lake Hill, TX 78746

TYPE OF FACILITY: Permanent

OPERATOR P-5 NO.: 073197
RRC DISTRICT NO.: 08
COUNTY OF PLANT LOCATION: Ector

PURPOSE OF FILING:
X New permit for new facility. Estimated completion date: 12/31/19

From Odessa, merge onto I-20 W. Take Exit 104. Turn right onto FM 866 N. Turn right onto 42nd St. Turn right onto Draper Dr. In 0.4 miles take a left. In 700 feet the facility will be on the left. (Lat. 31.840674, Long. -102.541360)

See Attachment 2 for the treating process description.

MATERIAL TRANSPORTED TO PLANT IN:
X For-hire vehicles

TYPE OF FACILITY:
Plugged Oil Well
(Well API No. 13536058)

OPERATOR:
Sage Energy Company
(Operator No. 743215)

TYPE OF FACILITY:
Crude Oil Transmission Pipeline
(T4 Permit No. 04861)

OPERATOR:
Plains Pipeline L.P.
(Operator No. 667884)

CERTIFICATION:
I certify under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that it was prepared by me or under my supervision and direction, and that the data and facts stated herein are true, correct, and complete to the best of my knowledge.

SIGNATURE:
Coly T. Jones

President

DATE:

PHONE:
432.236-4120

TO BE COMPLETED BY RAILROAD COMMISSION PERSONNEL

This permit is valid until cancellation under either 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
   a. the permit facility has been inactive for 12 months or
   b. there has been a violation or a violation is threatened of any provision of the permit, the conservation laws in the state,
      or rules or 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.

Facility Name: Blacklion Odessa Reclamation Facility

RECEIVED
RRC OF TEXAS
DECEMBER 18, 2019
O & G
AUSTIN, TX
PERMIT APPENDIX B

Facility Schematic Diagram

Process & Treatment Area Diagram
PERMIT APPENDIX C

Secondary Containment Diagram
SECONDARY CONTAINMENT PLAN VIEW

SECTION A-A'

105'
91'
79'

1'

EARTHEN BERM COMPACTED TO 95% STANDARD PROCTOR PER ASTM D698
AND PERMEABILITY OF 1x10^-7 M/SEC

NATURAL GROUND

SECTION B-B'

80'
66'
54'

1'

EARTHEN BERM COMPACTED TO 95% STANDARD PROCTOR
PER ASTM D698 AND PERMEABILITY OF 1x10^-7 M/SEC

NATURAL GROUND

RECEIVED
RBC OF TEXAS
FEB 03 2020
AUSTIN, TX