



# RAILROAD COMMISSION OF TEXAS

## OIL AND GAS DIVISION

GEOPURE HYDROTECHNOLOGIES LLC  
777 MAIN STREET SUITE 600  
FORT WORTH TX 76102

Re: Permit No. MR-0022,  
Authorization to Treat Produced Water and Fracture  
Flow-back Water for Use and/or Re-use  
Statewide Authority  
Districts 1, 2, 3, 4, 5, 6, 7B, 7C, 8, 8A, 9 and 10

Based on information contained in your application received March 30, 2012, and subsequent information received to date you are hereby authorized to handle, treat, and recycle the following non-hazardous oil and gas wastes: produced water and fracture flow-back water.

The GeoPure AdvancedHydro System™ mobile water recycling system shall include Chemical Flocculation, Dissolved Air Flotation, Ultra Filtration, Organics Removal Polymer Filtration, Reverse Osmosis technologies and other chemical-additive technologies, or any combination of those technologies as presented in the application. The system will transfer produced water and fracture flow-back fluids via flexible hoses from authorized or permitted pits or storage tanks owned, used and maintained by the generator into the mobile water recycling system unit on an oil and gas lease or well site owned and operated by the generator. After treatment, the recyclable product will be transferred to storage tanks, or authorized or permitted pits. This authority is granted in accordance with 16 TAC Chapter 4, Subchapter B, and subject to the following minimum conditions:

### I. GENERAL PERMIT CONDITIONS

- A. The effective date of this permit is August 6, 2012.
- B. The authority granted by this permit expires on August 5, 2017.
- C. Only non-hazardous oil and gas wastes subject to the jurisdiction of the Railroad Commission of Texas and exempt from RCRA, Subtitle C may be treated. The permittee may handle, treat, and recycle only produced water and fracture flow back water on an oil and gas lease or well site owned and operated by the generator of the produced water and fracture flow back water to be treated.
- D. The permittee is responsible for:
  - 1. Managing recyclable product generated by the mobile water recycling system and until custody of the recyclable product is either transferred to the generator for down-hole use or it is disposed of in an authorized manner;

2. Ensuring the proper management and disposition of any oil and gas waste or partially treated waste generated by the treatment until custody of the waste is either transferred to the generator for down-hole use or the generated waste resulting from the treatment is disposed of in an authorized manner;
  3. Remediating any soil, surface water or ground water affected by spills or leaks resulting from activities associated with the mobile water recycling system; and
  4. Diverting stormwater away from the treatment area or collecting and disposing of any stormwater that is contaminated as a result of contact with recyclable product, oil and gas waste or partially treated waste generated by the mobile water recycling system until custody of the recyclable product or waste is transferred to the generator for down-hole use.
- E. No oil and gas NORM (naturally occurring radioactive material) waste, as defined in 16 TAC § 4.603, or waste from a facility that is licensed by the Texas Department of State Health Services to process oil and gas NORM waste may be treated by the mobile water recycling system.
- F. The Commission may consider this permit for administrative renewal upon review.
- G. Any request for renewal should be received at least 60 days prior to the permit expiration date.
- H. This permit is not transferable without the consent of the Commission. Any request for transfer of this permit should be filed with Technical Permitting in Austin at least 60 days before the permittee wishes the transfer to take place.
- I. The permittee shall submit a Semiannual Report in accordance with Condition IV.B. of this permit.
- J. This permit does not authorize the discharge of any oil and gas waste from the mobile water recycling system or associated oil and gas waste storage areas, including contaminated stormwater.
- K. Material Safety Data Sheets must be submitted to Technical Permitting in Austin for any previously unrepresented chemical to be used in the mobile water recycling system. Use of the chemical is contingent upon Commission approval.
- L. Any soil, media, or other debris contaminated by a spill of waste or any other materials associated with the mobile water recycling system shall be promptly cleaned up and disposed of in an authorized manner; and the permittee must ensure that the generator notifies the appropriate District Office and Technical Permitting in Austin within 24 hours should a spill greater than 5 barrels occur of any RCRA-exempt waste, or a spill greater than or equal to the reportable quantity of any RCRA non-exempt waste as outlined in 40 CFR §302.4.
- M. The permittee must make all records required by this permit available for review and copying during normal business hours upon request of Commission personnel.
- N. Any pits to be used in conjunction with this facility not specifically authorized by 16 TAC § 3.8 must be permitted separately by the generator. If unpermitted, a permit must be obtained

before the pit may be used. A permit may be requested by filing an Application for Permit to Use and Maintain a Pit (Form H-11) and the supporting data with Technical Permitting.

- O. An independent laboratory neither owned nor operated by the permittee must conduct any analysis of sampling required by this permit.

## II. SITING

- A. When placed at an oil and gas lease or well site owned and operated by the generator, the mobile water recycling system and all associated storage areas must not be located:
  - 1. Within a 100-year floodplain.
  - 2. In a sensitive area, as defined in 16 TAC §3.91(a)(2).
  - 3. Within 100 feet of any surface waters of the state, including dry creeks or stream beds.
  - 4. Within 150 feet of any usable quality water wells.

## III. OPERATION

- A. The permittee must notify the surface owner prior to moving the mobile water recycling system onto any oil or gas lease or well site owned and operated by the generator of the waste to be treated.
- B. The appropriate District Office must be notified at least 7 days prior to placing the mobile water recycling system and all associated storage areas on an oil and gas lease or well site owned and operated by the generator of the waste to be treated. Notification of the District Office must include the name of the generator, the lease name, the lease number and the well number for the lease on which the mobile water recycling system will be placed.
- C. A site layout plan must be prepared and submitted to the appropriate District Office at least 7 days prior to placing the on-site-mobile water treatment system on an oil and gas lease. The plan must include the layout of the recycling facility showing the location and information on the design and size of all receiving, processing, and storage areas and all equipment used in the recycling process.
- D. The mobile water recycling system must be operated on an oil and gas lease or well site owned and operated by the generator of the waste to be treated.
- E. All storage areas must be maintained in proper working condition.
- F. The recyclable product, as defined in 16 TAC Chapter 4, Subchapter B, shall consist of the water treated by the mobile water recycling system, which will subsequently be used for the makeup of fracture fluids.
- G. Oil and gas waste to be treated by the mobile water recycling system must be stored in above-ground tanks or a pit authorized or permitted to store the waste operated by the generator and pumped into the mobile water recycling system via flexible hoses.
- H. A maximum volume of 35,000 barrels of oil and gas waste to be treated by the mobile water recycling system may be stored at the site at any given time.

- I. The mobile water recycling system may not be kept any oil and gas lease or well site for more than 365 days.
- J. The recyclable product must be stored in above-ground storage tanks, or in authorized or permitted pits operated by the generator until transported for re-use in the well completion process.
- K. A maximum volume of 70,000 barrels of recyclable product may be stored at the site at any given time.
- L. If custody of the recyclable product is not transferred to the generator within 15 days of its creation or disposed of in an authorized manner, the permittee is responsible for its disposal in an authorized manner.
- M. The recyclable product may only be used in the makeup of fracturing fluid at the site at which it was generated or at another well site owned or leased by the generator who generated the oil and gas waste prior to its treatment. Any excess recyclable product that is not used in the makeup of fracturing fluid must be disposed of in an authorized manner.
- N. A maximum volume of 3,000 barrels of solid waste generated from the mobile water treatment system (settled solids, filter cake, etc.) may be stored at the site at any given time.
- O. The solid waste resulting from the treatment must be disposed of in an authorized manner.
- P. Any waste product or non-recyclable product generated by the mobile water recycling system must be disposed of in an authorized manner within 30 days of generation.
- Q. The permittee must have personnel onsite at all times when the mobile water recycling system is in operation. If personnel are not on site, the mobile water recycling system must be in a non-operational state and secured to prevent unauthorized access.
- R. A Skim Oil/Condensate Report (Form P-18) must be filed for every month in which skim oil is recovered during the operation of the mobile water recycling system and then subsequently sold.

#### **IV. RECORDKEEPING AND REPORTING REQUIREMENTS**

##### **A. RECORDKEEPING**

- 1. Records must be kept of all waste treated for a period of three (3) years from the date of treatment. These records must include the following for each mobile water recycling system and site:
  - a. Date the appropriate district office was notified.
  - b. Name of the generator of the waste to be treated.
  - c. Name of the waste hauler, if applicable, that transported waste to the treatment site.
  - d. Lease Name, Lease Number or Gas I.D. Number and Well Number, or API Number where the mobile water recycling system was placed.
  - e. Lease Name, Lease Number or Gas I.D. Number and Well Number, or API Number where the treated oil and gas waste that was generated.

- f. Lease Number or Gas I.D. Number and Well Number, or API Number where the recyclable product was re-used.
- g. Classification of the water from each lease as produced water, or fracture flow-back water, or a mixture thereof.
- h. Analysis of the total dissolved solids, total suspended solids, and pH of the frac flow-back and produced water prior to treatment by the mobile water recycling system.
- i. Volume of produced water and frac flow-back water treated in the mobile water recycling system per day.
- j. Volume of recyclable product, including water and salable oil, resulting from the mobile water recycling system per day.
- k. The total dissolved solids, total suspended solids, and pH of the recyclable product generated from the mobile water recycling system from a weekly sample or a sample collected every 50,000 barrels, whichever is more frequent.
- l. Volume of solid waste generated from the mobile water recycling system per day.
- m. The location at which the solid waste generated by the mobile water recycling system was disposed.
- n. Date(s) the oil and gas waste was treated by the mobile water recycling system.
- o. Date(s) the volumes of recyclable product was re-used.

#### B. REPORTING

1. A copy of the records required in Permit Condition No. IV.A. must be submitted to Technical Permitting in Austin as part of the Semiannual Report. If no waste was stored, handled, treated or re-used within a reporting period, a written statement indicating that no waste was stored, handled, treated or re-used must be submitted to Technical Permitting in Austin as part of the Semiannual Report.
2. The first Semiannual Report shall cover the period beginning on effective date of this permit and ending December 31, 2012. The reporting periods shall thenceforth be January 1 through June 30 and July 1 through December 31 of each year.
3. The Semiannual Report shall be submitted to Technical Permitting in Austin no later than the 31<sup>st</sup> day of the month following the end of each reporting period, or each January 31 and each July 31, respectively.

#### V. CLOSURE

- A. All equipment owned and operated by the permittee associated with the treatment of oil and gas waste and the storage of recyclable product must be removed from the site within 120 days of the completion of the last treatment of produced water or frac flow-back water, excluding authorized or permitted pits which must be closed in accordance with 16 TAC §3.8 or its associated permit, respectively.
- B. The contents of any vessels or other containers, including unused recyclable product, shall be disposed of in an authorized manner within 120 days of completion of the last treatment of produced water or frac flow-back water.

Failure to comply with any provision of this permit shall be cause for modification, suspension or termination of this permit. This permit may be canceled if Technical Permitting determines that the permittee is in violation of the conditions of this permit or if the permittee's operations pursuant to the permit are causing or allowing pollution of surface or subsurface water.



Michael Sims, P.E., Manager  
Environmental Permits and Support  
Technical Permitting

cc: RRC – San Antonio/01 & 02  
Houston/03  
Corpus Christi/04  
Kilgore/05 & 06  
Abilene/07B  
San Angelo/07C  
Midland/08 & 08A  
Wichita Falls/09  
Pampa/10