



RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

Guidance Document
Permit Application for Reusable Product

Listed below are the requirements for a permit to treat/recycle oil and gas solid waste for commercial or industrial use as concrete bulking agents, landfill cover or capping material, landfill berms, construction fill material or treated aggregate, closure or backfill material, firewall material, or other construction fill material, where the treated waste is considered to be reusable product for use at a commercial or industrial facility.

I. GENERAL REQUIREMENTS

- A. An application for a permit for a stationary commercial solid oil and gas waste recycling facility shall be filed with the Railroad Commission of Texas (RRC) Technical Permitting Section located in Austin. The applicant shall mail or deliver a copy of the application to the appropriate RRC District Office for the county in which the facility is to be located on the same day the original application is mailed or delivered to Technical Permitting in Austin. A permit application shall be considered filed with the RRC on the date it is received by the RRC in Austin.
- B. The permit application shall contain the following:
 - 1. Applicant's name;
 - 2. Organizational Report (P-5) number;
 - 3. Physical office and, if different, mailing address;
 - 4. Facility address;
 - 5. Name of a contact person; and
 - 6. Contact information including telephone number and email.
- C. Engineering and geologic work products prepared by the applicant shall be sealed by a Texas registered Professional Engineer or Geologist, respectively, as required by the Texas Occupations Code, Chapters 1001 and 1002.
- D. A permit for a stationary commercial solid oil and gas waste recycling facility issued pursuant to this division shall be issued for a term of not more than five years. Permits issued may not be renewed or transferred to another operator without the written approval of Technical Permitting.
- E. Notify the surface owner of the tract where the recycling will take place and the appropriate RRC District Office before recycling operations commence on each tract.

- F. Financial security as implemented by Statewide Rule §3.78 is required prior to operating. Provide a closure cost estimate and financial security for the maximum amount necessary to close the facility. The following documents, made available on the RRC website, will assist in the preparation of the estimate and the financial security: Closure Cost Estimate Requirements, Guidance for Filing Forms CF-1 and CF-2, Forms CF-1 and CF-2.
- G. The permit application shall contain an original signature in ink, the date of signing, and the following certification: "*I certify that I am authorized to make this application, that this application 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.*"

II. SITE INFORMATION

- A. Provide a description of the proposed facility location and surrounding area.
- B. Provide the name, physical address and, if different, mailing address, and telephone number of every owner of the tract on which the facility is to be located. If any owner is not an individual, the applicant shall include the name of a contact person for that owner.
- C. Perform at least one soil boring to a depth of at least 100 feet below land surface to identify site lithology and the presence or absence of groundwater less than 100 feet below land surface. Provide the depth to the shallowest subsurface water and the regional direction of groundwater flow. Provide a sieve analysis for each identified clay stratum greater than 10 feet in thickness (use best judgment).
- D. Provide the average annual precipitation and evaporation rates at the proposed site and the source of this information.
- E. Provide the identification of the soil and subsoil by typical name and description of the approximate proportion of grain sizes, texture, consistency, moisture condition, and other pertinent characteristics, and the source of this information.
- F. Submit a copy of a county highway map with a scale and north arrow showing the location of the proposed facility.
- G. Submit a complete, original 7 1/2 minute United States Geological Survey topographic quadrangle map clearly indicating the outline of the proposed facility, the location of any pipelines or easements that underlay the facility but are not included on the topographic map, and the location of the 100-year flood plain or wetlands (if present) and the source of the information.
- H. A permit for a stationary commercial solid oil and gas waste recycling facility may be issued only if Technical Permitting or the Director determines that the facility is located in an area where there is no unreasonable risk of pollution or threat to public health or safety.

1. A stationary commercial solid oil and gas waste recycling facility shall not be located:
 - i. Within a 100-year flood plain, in a streambed or wetland, or in a sensitive area as defined by Statewide Rule §3.91 of this title (relating to Cleanup of Soil Contaminated by a Crude Oil Spill); or
 - ii. Within 150 feet of surface water or public, domestic, or irrigation water wells.
2. Factors that the RRC will consider in assessing potential risk from a stationary commercial solid oil and gas waste recycling facility include:
 - i. The volume and characteristics of the oil and gas waste, partially treated waste and recyclable product to be stored, handled, treated and recycled at the facility;
 - ii. Depth and quality of the shallowest groundwater (surficial aquifer);
 - iii. Distance to the nearest property line or public road;
 - iv. Proximity to coastal natural resources, sensitive areas as defined by Statewide Rule §3.91 of this title, or surface water and/or public, domestic, or irrigation water wells; and
 - v. Any other factors the RRC deems necessary in determining whether or not issuance of the permit will pose risk to groundwater or surface water.

III. PROPERTY INFORMATION

- A. Submit a copy of the signed lease agreement between the applicant and the owner of the tract upon which the facility is to be located that includes owner acknowledgment of the proposed use of the property defined in the reuse.
- B. Identify the location of the facility by including a plat or plats showing:
 3. A scale and north arrow showing the tract size in square feet or acres, the section/survey lines, and the survey name and abstract number;
 4. The site coordinates in degrees, minutes, and seconds of longitude and latitude;
 5. A clear outline and legal description of the proposed facility's boundaries and land use;
 6. All tracts adjoining the tract upon which the facility is to be located;
 7. The name of the surface owner or owners of such adjoining tracts; and
 8. The distance from the facility's outermost perimeter boundary to water wells, residences, schools, religious institutions, or hospitals that is within 500 feet of the boundary.

IV. DESIGN AND CONSTRUCTION INFORMATION

- A. Describe the layout and design of the facility including a plat drawn to scale with north orientation and information on the design and size of all receiving, processing, and storage areas and all equipment (e.g., pug mill), tanks, silos, monitor wells, dikes, fences, and access roads.
- B. A permit application for a stationary commercial solid oil and gas waste recycling facility also shall include:
 1. A description of the type and thickness of liner and monitoring system (e.g., synthetic, fiberglass, steel concrete), if any, for all tanks, silos, pits, and storage areas/cells.
 2. For storage areas where tanks and/or liners are not used, credible engineering and/or geologic information demonstrating that tanks or liners are not necessary for the protection of surface and subsurface water.
 3. A scaled map view and two perpendicular cross-sectional views of each pit and/or storage areas/cells to be constructed, showing the bottom, sides, dikes, and dimensions of each.
 4. A plan for the prevention and control of chemical or waste spills at the facility.
 5. A stormwater management plan to control, minimize, and isolate contact stormwater, manage non-contact stormwater runoff, and retain incoming wastes during wet weather including the location and dimensions of dikes and/or storage basins that would collect storm water from the facility during a minimum of 25-year, 24-hour maximum rainfall event, and all calculations made to determine the required capacity and design.
 6. Performance of a soil boring advanced to at least 100 feet below land surface to identify the presence or absence of groundwater. If groundwater is identified, provide a plan for the installation of no less than three groundwater monitoring wells at the facility in accordance with 16 Texas Administrative Code, Part 4, Chapter 76, relating to Water Well Drillers and Water Well Pump Installers.
 7. A soil boring lithological log and other information for each soil boring or well drilled:
 - i. Describe the soils using the Unified Soils Classification System (equivalent to American Society of Testing and Materials (ASTM) D 2487 and ASTM D 2488).
 - ii. Identify the method of drilling, total depth, and top of first encountered water or saturated soils.
 - iii. Include a well completion diagram for each monitoring well.
 - iv. Include a survey elevation for each wellhead reference point (top of casing elevation) relative to a real or arbitrary bench mark and mean sea level.
 - v. Include a potentiometric map showing static water levels, the estimated direction of groundwater flow, and the calculated gradient.

8. Technical Permitting and the District Director may waive any or all of the groundwater monitoring well requirements if the permittee demonstrates that an on-site boring to a minimum depth of 100 feet recovers no groundwater during a 24-hour test.

V. OPERATING INFORMATION

- A. Provide the estimated maximum volume of untreated oil and gas waste and partially treated oil and gas waste to be stored at the facility.
- B. Provide the estimated maximum volume and time that the recyclable product will be stored at the facility.
- C. Submit a plan to control unauthorized access to the facility.
- D. Submit a detailed waste acceptance plan that:
 1. Identifies anticipated volumes and specific types of wastes (e.g., oil-based drilling fluid and cuttings, crude oil-contaminated soils, production tank bottoms, etc.) to be accepted at the facility for treatment and recycling.
 2. Summarizes waste testing procedures prior to processing to ensure that only oil and gas waste within the jurisdiction of the RRC authorized by this division, or the permit, will be received at the facility.
- E. Submit plans for keeping records of the source and volume of wastes accepted for recycling, including waste received by well number, American Petroleum Institute (API) number, lease or facility name, lease number and/or gas identification number, county, and RRC district.
- F. Describe the recycling process to be employed along with a flow diagram showing the process and identifying all equipment and chemicals, bio-accelerators, or additives (e.g., asphalt emulsion, quicklime, Portland cement, fly ash, etc.). Provide the Safety Data Sheets for any compound, additive, or bio-accelerator.
- G. Provide a description of all inert material (e.g., brick, rock, gravel, caliche) to be stored at the facility and used as aggregate in the treatment process.
- H. Provide a description of any testing performed to demonstrate that the proposed processing will result in a recyclable product that meets the engineering and environmental standards for the proposed use.
- I. Estimate the duration of operation at the proposed facility.
- J. TRIAL RUN
 1. The applicant must perform a Trial Run in accordance with the following procedure:
 - i. The permittee shall notify the appropriate District Office for the county in which the facility is located prior to commencement of the Trial Run.
 - ii. The permittee shall demonstrate the ability to successfully process a 1,000 cubic yard batch of solid oil and gas waste.

- a. Technical Permitting in Austin and the appropriate District Office must be notified in writing at least 72 hours before waste processing begins.
 - b. Samples of the partially treated waste must be collected and analyzed as specified by paragraph VI.D.1. of this guidance document (relating to Monitoring Information for Reusable Product).
 - c. Samples shall be collected from every 200 cubic yards of each 1,000 cubic yard batch and shall be analyzed for moisture content by ASTM D 2216, and modified to provide that samples meet the requirements for partially treated waste. The total moisture content shall be less than 50 percent by weight or zero free moisture.
- iii. Technical Permitting will approve the Trial Run if the report demonstrates that the reusable product meets or exceeds the environmental and engineering standards established in this guidance document.
 - iv. A written report of the Trial Run shall be submitted to Technical Permitting in Austin and to the appropriate District Office within 60 days of receipt of the analyses required in Statewide Rule §4.243 of this title. The following information must be included:
 - a. The actual volume of waste material processed.
 - b. The volume of stabilization material used.
 - c. Copies of all geotechnical or chemical laboratory analytical reports and chain of custody required by paragraph VI.D.1. of this guidance document.
 - v. The treated waste must meet the limitations specified in paragraph VI.D.1. before it can be considered reusable product or treated aggregate.
 - vi. The operator shall not use the recyclable product until Technical Permitting has approved the Trial Run report.

K. LETTER OF AUTHORITY: REQUEST FOR REUSE OF TREATED MATERIAL

1. Prior to reuse and distribution of the treated material, the applicant must fulfill the following requirements:
 - i. Complete the Trial Run as specified in paragraph V.J. of this guidance document.
 - ii. Obtain financial security in the form of a bond or letter of credit representative to properly close the production facility.
 - iii. Obtain a permit to produce reusable product.
 - iv. Demonstrate that the reusable product has met the parameter limits specified in paragraph VI.D.1. of this guidance document.
 - v. Once the permit to produce the reusable product has been issued to the operator of the production facility, a separate application for a Letter of

Authority (LOA) to Technical Permitting requesting the reuse of the material for each specific job/location must be submitted. The following information is required for the LOA application to authorize final distribution of the recycled product:

- a. Site specific requirements including a map drawn to scale with coordinates showing the site location of the final disposition of reusable product with latitude and longitude.
- b. A description of the purpose for the reusable product (e.g., as construction fill material, landfill cover, or berm material, etc.).
- c. Volume of reusable product to be used at the location.
- d. The time frame needed for the production and application of reusable product for the job.
- e. Landowner approval for the management and final disposition of reusable product on-site.

VI. MONITORING INFORMATION

- A. Provide a sampling plan for the partially treated waste to ensure compliance with permit conditions.
- B. Submit a plan for sampling groundwater monitoring wells (if any) at the facility as required by the permit and this division.
- C. Submit a plan and schedule for conducting periodic inspections, including plans to inspect equipment, processing, and storage areas.

D. REUSABLE PRODUCT

1. The permit shall include a requirement for the reusable product that a minimum of one sample from each 200 cubic yards (cu yd) of partially treated waste be collected and analyzed for every 800 cu yd composite for the following minimum parameters and meet the following limits:

<u>PARAMETER</u>	<u>LIMITATION</u>
Moisture Content <i>ASTM D 2216 or equivalent</i>	< 50% (by weight) or zero free moisture
pH ¹ <i>EPA Method SW-846 9045C</i>	6.5 - 9 s.u.
Electrical Conductivity (EC) ²	8.0 mmhos/cm
Sodium Adsorption Ratio (SAR) ²	12

¹ In addition to the criteria set forth, E&P waste, when chemically treated (fixated), shall be acceptable as reusable material with a pH range of 6.5 to 12 s.u. and an electrical conductivity of up to 50 mmhos/cm, provided such reusable material passes leachate testing requirements for chlorides and metals in VI.D.1. above.

² LDNR Lab Procedures for Extraction and Analysis of E&P Waste or equivalent

Exchangeable Sodium Percentage (ESP) ³	15
Total Barium ³ - Reuse at Commercial Facility	100,000 ppm
Louisiana Department of Natural Resources (LDNR) Leachate Test Method, 1:4 Solid ³	
Total Petroleum Hydrocarbons (TPH) ³	10.0 mg/L
Chlorides ³	500 mg/L
Toxicity Characteristic Leaching Procedure (TCLP) Benzene <i>EPA Method SW-846 1311/8021</i>	0.5 mg/L
Leachable Metals ³ <i>EPA Method SW-846 6010/6020/7000/7470/7471</i>	
Arsenic	0.5 mg/L
Barium	10.0 mg/L
Cadmium	0.1 mg/L
Chromium	0.5 mg/L
Copper	0.5 mg/L
Lead	0.5 mg/L
Mercury	0.02 mg/L
Molybdenum	0.5 mg/L
Nickel	0.5 mg/L
Selenium	0.1 mg/L
Silver	0.5 mg/L
Zinc	5.0 mg/L

E. GROUNDWATER MONITORING

1. Wells must be sampled or monitored for the following parameters after installation and quarterly thereafter:

<u>PARAMETER</u>	<u>UNITS</u>
Static Water Level	feet (ft)
Total Depth	ft
Benzene <i>EPA Method 8260/8021B</i>	mg/L
TPH <i>Method TX1005</i>	mg/L

³ LDNR Lab Procedures for Extraction and Analysis of E&P Waste or equivalent

<u>PARAMETER</u>	<u>UNITS</u>
Total Dissolved Solids (TDS) <i>Standard Method 160.1 or equivalent</i>	mg/L
pH <i>EPA Method 150.1 or equivalent</i>	s.u.
Calcium, Magnesium, Potassium, and Sodium <i>EPA Method 6020 or equivalent</i>	mg/L
Bromides, Carbonates, Chlorides, Nitrates, and Sulfates <i>EPA Method 300 or equivalent</i>	mg/L
Total Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver <i>EPA Method 200, 200.7, 6010, 6020, 7470 (series), or equivalent</i>	mg/L

- F. All chemical laboratory analyses required must be performed using appropriate Environmental Protection Agency (EPA) or Standard Methods by an independent National Environmental Laboratory Accreditation Program (NELAP) certified laboratory neither owned nor operated by the permittee. Any sample collected for chemical laboratory analysis must be collected and preserved in a manner appropriate for that analytical method as specified in 40 CFR Part 136. All geotechnical testing must be performed by a laboratory certified to conduct geotechnical testing according to standards specified by the ASTM.

VII. FACILITY CLOSURE INFORMATION

- A. Submit a detailed plan for closure of the facility when operations terminate. The closure plan shall address how the applicant intends to:
1. Remove waste, partially treated waste, and/or reusable product from storage areas, tanks, and processing areas at the facility.
 2. Dismantle and remove all equipment, liners, and tank pads.
 3. Close all storage areas/cells;
 4. Demolish and level berms;
 5. Contour and reseed disturbed areas;
 6. Sample and analyze applicable soil and groundwater locations throughout the facility; and
 7. If there are no associated disposal pits, plug and abandon any groundwater monitoring wells in accordance with 16 TAC Part 4, Chapter 76.

- B. All soil samples required for closure must be analyzed for the following parameters and the specified limitations shall not be exceeded:

<u>PARAMETER</u>	<u>LIMITATION</u>
pH <i>EPA Method 9045C or equivalent</i>	6 to 10 standard units
Electrical Conductivity (EC) ⁴	≤ 4.0 mmhos/cm
TPH <i>EPA Method 5035A/TX1005</i>	≤ 10,000 mg/kg or 1 % by weight
Total Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) <i>EPA Method 5035A/8021/8260B</i>	≤ 30 mg/kg
Metals (Total) <i>EPA Method 6010/6020/7471A</i>	
Arsenic	≤ 10 mg/kg
Barium	≤ 10,000 mg/kg
Cadmium	≤ 10 mg/kg
Chromium	≤ 100 mg/kg
Lead	≤ 200 mg/kg
Mercury	≤ 10 mg/kg
Selenium	≤ 10 mg/kg
Silver	≤ 200 mg/kg

- C. A map drawn to scale showing the sample locations, a soil quality analytical table with the dates the samples were collected, and copies of the Laboratory Analytical Reports and Chain of Custody for the sampling protocol specified in paragraph VII.B. of this guidance document must be submitted to Technical Permitting in Austin.
- D. When acceptable constituent levels have been verified in writing by Technical Permitting, the washout pit, collecting pits, and sump pits must be dewatered, emptied, demolished, backfilled, compacted, and properly closed. All wastes, including the liners, must be removed and disposed of in an authorized manner. All berms must be leveled, and the site must be backfilled and restored to natural grade. Topsoil must be contoured and seeded with appropriate vegetation for the geographic region.

VIII. NOTICE

- A. A permit applicant for a stationary commercial solid oil and gas waste recycling facility shall publish notice and file proof of publication in accordance with the following requirements:

⁴ LDNR Lab Procedures for Extraction and Analysis of E&P Waste or equivalent

1. A permit applicant shall publish notice of the application in a newspaper of general circulation in the county in which the proposed facility will be located at least once each week for two consecutive weeks with the first publication occurring not earlier than the date the application is filed with the RRC and not later than the 30th day after the date on which the application is filed with the RRC.
 2. The published notice shall:
 - i. Be entitled, "Notice of Application for Commercial Solid Oil and Gas Waste Recycling Facility";
 - ii. Provide the date the applicant filed the application with the RRC for the permit;
 - iii. Identify the name of the applicant;
 - iv. State the physical address of the proposed facility and its location in relation to the nearest municipality or community;
 - v. Identify the owner or owners of the property upon which the proposed facility will be located;
 - vi. State that affected persons may protest the application by filing a protest with the RRC within 15 days of the last date of publication; and
 - vii. Provide the appropriate RRC address to which protests may be mailed.
 3. The applicant shall submit to the RRC proof of published notice as required by this section. Proof of publication of the notice shall consist of a sworn affidavit from the newspaper publisher that states the dates on which the notice was published, and the county or counties in which the newspaper is of general circulation, and to which are attached the "tear" sheets of the published notices.
- B. A permit applicant shall give personal notice and file proof of such notice in accordance with the following requirements:
1. The applicant shall mail or deliver notice to the following persons on or after the date the application is filed with the RRC office in Austin:
 - i. The surface owner or owners of the tract upon which the commercial recycling facility will be located;
 - ii. The city clerk or other appropriate official, if the tract upon which the facility will be located lies within the corporate limits of an incorporated city, town, or village;
 - iii. The surface owners of tracts adjoining the tract on which proposed facility will be located, unless the boundary with the adjoining tract is a distance of ½ mile or greater from the fence line or edge of the facility as shown on the plat required under Statewide Rule §4.249(b) of this title (relating to Minimum Real Property Information); and

- iv. Any affected person or class of persons that the director determines should receive notice of a particular application.
 2. Personal notice of the permit application shall consist of:
 - i. A copy of the application;
 - ii. A statement of the date the applicant filed the application with the RRC;
 - iii. A statement that a protest to the application should be filed with the RRC within 15 days of the last date of published notice, a statement identifying the publication in which published notice will appear, and the procedure for making a protest of the application to the RRC;
 - iv. A description of the location of the site for which the application was made, including the county in which the site is to be located, the name of the original survey and abstract number, and the direction and distance from the nearest municipality;
 - v. The name of the owner or owners of the property on which the facility is to be located;
 - vi. The name of the applicant;
 - vii. The type of fluid or waste to be handled at the facility; and
 - viii. The recycling method proposed, and the proposed end-use of the recycled material.
 3. The applicant shall submit to the RRC proof that personal notice has been given as required. Proof of notice shall consist of a copy of each notification letter sent, along with a statement signed by the applicant that includes the names and addresses of each person to whom the notice was sent, and the date that each person was notified of the application.
- C. If Technical Permitting has reason to believe that a person to whom the applicant was required to give notice of an application has not received such notice, then Technical Permitting shall not take action on the application until the applicant has made reasonable efforts to give such person notice of the application and an opportunity to file a protest to the application with the RRC.