



# RAILROAD COMMISSION OF TEXAS

## OIL AND GAS DIVISION

### PERMIT TO RECEIVE, STORE, HANDLE, TREAT AND DISPOSE OF CERTAIN NONHAZARDOUS OIL AND GAS WASTES

Landtreatment Facility  
Permit No. LT-0310

WEEKS ENVIRONMENTAL LLC  
P O BOX 1169  
PREMONT TX 78375-1169

Based on information contained in your application dated September 2, 2010 and subsequent information received to date, you are hereby authorized to receive, store, handle, treat, and dispose of certain non-hazardous oil and gas wastes as specified below at the following facility:

Dimmit County – Weeks Landtreatment Facility  
337.5 Acres  
VanderVoort, F. Survey No. 74, A-1241  
Dimmit County, Texas  
RRC District 01

Authority is granted to receive, store, handle, treat, and dispose of certain nonhazardous oil and gas wastes in accordance with Statewide Rule 8 and subject to the following minimum conditions:

#### **I. GENERAL PERMIT CONDITIONS:**

- A. The effective date of this permit is January 27, 2012.
- B. The authority granted by this permit expires on January 26, 2017.
- C. This permit may be considered for administrative renewal upon review by the Commission.
- D. Operations may not begin at the facility until a San Antonio district office inspection, in concurrence with Technical Permitting in Austin, indicates that the site has been constructed in accordance with this permit.
- E. This permit is not transferable without the consent of the Commission. Any request for transfer of this permit must be filed with Technical Permitting in Austin at least 60 days before the permittee wishes the transfer to take place.

- F. This permit does not authorize the discharge of any oil or gas waste from the facility.
- G. The permittee shall make all records available for review and/or copying during normal business hours upon request of Commission personnel.
- H. 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 the Technical Permitting determines that the facility is in violation of the conditions of this permit or if operation of the facility is causing or allowing pollution of surface or subsurface water.
- I. The permittee shall submit a Semiannual Report containing applicable information as required in Conditions II.B.5., VI.G., and VII.D. of this permit. The semiannual reporting periods shall be January 1 to June 30 and July 1 to December 31 of each year. The Semiannual Report shall be submitted no later than the 31<sup>st</sup> day after each reporting period, or each July 31<sup>st</sup> and January 31<sup>st</sup>, respectively.
- J. All laboratory analyses required to be performed by Conditions VI.D. and VII.A., VIII.C., and IX.A.1. shall be performed by an independent laboratory neither owned nor operated by the permittee.

## II. INCOMING WASTES:

### A. AUTHORIZED WASTES:

1. Only nonhazardous wastes subject to the jurisdiction of the Railroad Commission of Texas may be received or disposed of at the facility. You may receive, store, handle, treat, and dispose of only the following oil and gas wastes:
  - a. Oil-based drilling mud and associated cuttings
  - b. Water-based drilling mud and associated cuttings
  - c. Tank bottoms from gas plants, crude oil reclamation plants, and crude oil production/separation facilities.
  - d. Material from produced water collecting pits
  - e. Produced formation sand
  - f. Soil impacted by crude oil or hydrocarbon condensate
2. No waste may be received or disposed of at the facility if it is not 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 or disposed of at the facility.

3. 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 Health to process or treat oil and gas NORM waste may be received at this facility.
4. No wastes, such as oil, may be disposed of at the facility if that material is recyclable or reclaimable.

B. TESTING REQUIREMENTS FOR INCOMING WASTES:

1. For the purposes of this permit, a representative sample is defined as a composite sample composed of four (4) grab sample from each 50 cubic yards of waste material from each job (e.g., from each pit, spill location, reclamation plant, or tank bottom).
2. Prior to receipt at the site, a representative sample of waste from commercial oil and gas waste facilities and reclamation plants must be analyzed and may not exceed the limit for the following parameter:

<u>PARAMETER</u>	<u>LIMITATION</u>
TOX (Total Organic Halides)	100 mg/kg

3. Prior to or upon receipt at the site, representative samples of all incoming waste must be analyzed for the following parameters. TPH and Electrical Conductivity results shall be used to assure compliance with the landtreatment operational limits of Condition VIII.A., and pH levels must be within the following range:

<u>PARAMETER</u>	<u>METHOD</u>	<u>LIMITATION</u>
TPH	Carbon Range to C40+	Report; See Condition VIII.A.
Electrical Conductivity	Saturated Paste	Report; See Condition VIII.A.
pH	Standard	6 – 10

4. The permittee shall 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:
  - a. description of the site where the waste was generated, including:
    - (i) generator name;
    - (ii) lease name, lease number and well number or gas ID or API Well Number;
    - (iii) County.
  - b. carrier name;
  - c. amount of waste material received (specify units);

- d. type of waste and description of waste material, including any analyses required by subsection II.B.2 and II.B.3 above;
  - e. designated number of the cell in which the waste was placed.
5. A report of the records required by Condition II.B.2., II.B.3., and II.B.4. above shall be submitted to Technical Permitting in Austin as part of the Semiannual Report required in Condition I.J. of this permit.
  6. Any spills of waste or any other materials shall be promptly cleaned up and disposed of in an authorized manner.

### **III. GENERAL FACILITY DESIGN:**

- A. The general layout and arrangement of the facility shall be consistent with the "Facility Site Plan", which is attached to and incorporated as part of this permit as **Permit Appendix A.**
- B. Prior to beginning operations the facility shall have security to prevent unauthorized access. The entire facility shall be surrounded by a fence where access is not prohibited by terrain or vegetation. Access shall be secured by a locked gate when the facility is unattended.

### **IV. LANDTREATMENT AREA:**

- A. CONSTRUCTION OF LANDTREATMENT AREA:
  1. The landtreatment area shall be constructed of 11 landtreatment cells of varying size for a total of approximately 138 acres of landtreatment area. These cells shall be arranged and identified as indicated on the "Facility Site Plan", **Permit Appendix A.**
  2. Dikes shall be constructed around the landtreatment cells with a minimum height of three (3) feet and a width at the base of at least nine (9) feet. The dikes must be keyed into the natural soils, and must be constructed and maintained to ensure the integrity of the dike system and its ability to prevent storm-water run-off from exiting the facility.
  3. The landtreatment cells shall be separated using levees to partition waste in the individual cells. These levees shall be constructed and maintained to preserve at least 2 feet of freeboard in the landtreatment cells and shall have a slope no steeper than 3H:1V.
  4. The treatment cells shall be designed with a slope of between 0.75 and 1.5 percent to direct runoff from the landtreatment cells to facilitate removal of rainwater.
  5. Run-on shall be controlled and diverted around the landtreatment cells.
  6. An off-load ramp(s) shall be constructed for each treatment cell. The ramp(s) shall be constructed and maintained in a manner that does not impede the function of the landtreatment cell dikes/levees to prevent runoff into the cells and runoff out of the cells.

**V. LANDTREATMENT AREA OPERATION**

- A. Use of the treatment cells is limited to treatment of wastes authorized in Condition II.A. of this permit.
- B. The waste must be applied in such a manner that the waste will not pool or migrate off the approved landtreatment area or enter any drainage ditch, dry creek, flowing creek, river, or any other body of surface water.
- C. Waste shall be applied evenly to a maximum thickness of 4 inches per application and shall immediately and thoroughly be tilled into the soil.
- D. The permittee shall ensure that the waste is uniformly dispersed to a total depth not to exceed 12 inches and at such a rate that, after tilling, the maximum levels for TPH do not exceed 5% and the maximum levels for Electrical Conductivity (EC) do not exceed the loading rate specified in Condition VI.B. These loading rates shall be calculated based on the actual results of the sample analyses required by Condition No. II.B.3 and VIII.A.
- E. The cumulative waste applied to any cell shall not exceed twelve (12) inches.
- F. The maximum tilling depth shall not exceed twelve (12) inches below ground level.
- G. No waste may be applied to a landtreatment cell during periods of rainfall.
- H. Measures shall be taken to control dust at all times.
- I. Fertilizer shall be added as required to maintain optimum C:N:P ratio.
- J. Any standing or pooled rainwater in the landtreatment cells or within the perimeter berm shall be removed and disposed of in an authorized manner.
- K. Should results of sample analyses required by Condition No. VI.D. below indicate the average SAR is greater than 12 in the STZ or WTZ in any cell, deposition of waste in that cell shall cease until the SAR in that cell is remediated to below 12 in the STZ and WTZ.

**VI. LANDTREATMENT AREA MONITORING**

- A. For the purposes of monitoring and sampling the soils, each landtreatment cell shall be divided into four equal-size quadrants. The following definitions will be employed for each quadrant (Note: BGS is defined as Below Ground Surface):

<u>SOIL CORE SAMPLING DEPTHS</u>	<u>THREE ZONES</u>
<u>Treatment Zone</u>	<u>Zone Depth</u>
Surface Treatment Zone (STZ)	surface to 12" BGS
Waste Treatment Zone (WTZ)	12" to 24" BGS
Compliance Monitoring Zone (CMZ)	24" to 36" BGS

- B. For the purposes of establishing an Electrical Conductivity (EC) closure limit for each cell, five random samples shall be collected in the WTZ from each cell identified in **Permit Appendix A** and analyzed for EC using the Saturated Paste Extraction (SPE) method prior to the application of waste to that cell. The analysis of the samples and a map indicating the sample locations shall be submitted to Technical Permitting in Austin.

The EC closure limit shall be established for each cell by eliminating the minimum and maximum EC results from the five samples collected in accordance with the preceding paragraph and calculating the arithmetic mean EC of the remaining three samples. If any of the three averaged values analyzed as "Non-detect", the laboratory minimum detection limit (MDL) shall replace the sample value. The MDL shall be 0.02 mmhos/cm or less for all sampling required by this condition.

The EC closure limit for each cell shall be the lesser of the arithmetic mean plus four (4) mmhos/cm or the upper limit of the EC range established by the Natural Resource Conservation Service (NRCS) soil type associated with that cell.

If multiple soil types are present in that cell, the upper limit of the EC range established by the NRCS for each soil type shall be averaged and the average value shall be used in the comparison required in the preceding paragraph in place of the single upper EC limit for a cell that contains only a single soil type.

The EC closure limit shall be established prior to the application of waste to the landtreatment cells. Application of waste to the landtreatment cells shall not commence without written approval from Technical Permitting.

- C. Two (2) randomly selected core samples from each landtreatment cell quadrant shall be collected using standard approved sampling and collection procedures. A minimum of one (1) grab sample shall be obtained from each of the three zones in each core. The samples from each zone shall be composited to obtain one composite sample for each of the three (3) zones in each landtreatment cell.
- D. The composite samples for each of the three (3) zones shall be analyzed as follows using EPA approved laboratory methods or EPA methods approved on an interim basis:

<u>Sampling Frequency</u>	<u>Zone</u>	<u>Parameters to be analyzed</u>
Once for baseline Prior to waste application	STZ, WTZ	pH, EC, SAR, CEC, TPH (Carbon Range up to C40+), Soluble Anions and Cations, Total Metals: Ag, As, Ba, Cd, Cr, Pb, Hg and Se
Quarterly	STZ, WTZ	pH, EC, SAR, CEC, TPH (Carbon Range up to C40+), BTEX, Soluble Anions and Cations, Total Metals: Ag, As, Ba, Cd, Cr, Pb, Hg, and Se

Annually	CMZ	pH, EC, SAR, CEC, TPH (Carbon Range up to C40+), BTEX, Soluble Anions and Cations, Total Metals: Ag, As, Ba, Cd, Cr, Pb, Hg, and Se
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- E. More frequent analyses may be required depending on the results of analyses required by Condition No. VI.D.
- F. The San Antonio District Office shall be notified at least 48 hours prior to any sampling event.
- G. A data interpretation and summary of the sample analysis shall be submitted to Technical Permitting in Austin and the San Antonio District Office as part of the Semiannual Report required in Condition No. I.J. of this permit.

## VII. GROUNDWATER MONITORING

- A. Four (4) monitor wells must be constructed as indicated in submitted information and must be located as indicated on the "Facility Site Plan", which is attached to and incorporated as part of this permit as **PERMIT APPENDIX A**, unless an onsite boring taken to 100 feet recovers no groundwater in a 24-hour test.
- B. The monitor wells shall be installed in accordance with 16 TAC Part 4, Chapter 76 Water Well Drillers and Water Well Pump Installers.
- C. The wells must be completed in the shallowest groundwater zone and the completion must isolate that zone from any deeper groundwater zone.
- D. The screened interval of the wells must be designed to intercept the top of the groundwater.
- E. Provision must be made to protect the well heads from damage by vehicles and heavy equipment.
- F. The following information must be submitted after the wells are completed:
  - 1. A soil boring log for each 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, total depth, and the top of the first encountered water or saturated soils.
  - 2. A well installation diagram for each well.
  - 3. A survey elevation for each well head reference point.
  - 4. A potentiometric map showing static water levels and the calculated direction of groundwater flow.

- G. The Commission reserves the right to require additional monitor wells if the Commission believes they are warranted based upon a review of groundwater monitoring information.
- H. Monitor wells must be monitored for the following parameters after installation and quarterly thereafter:

1. pH	9. sulfates
2. chlorides	10. nitrates
3. total dissolved solids (TDS)	11. carbonates
4. total petroleum hydrocarbons (TPH)	12. calcium
5. phenolic compounds	13. magnesium
6. groundwater elevation	14. sodium
7. benzene	15. potassium

- I. A copy of all analytical results and measurements required by Condition VII.H. above shall be submitted to Technical Permitting in Austin as part of the Semiannual Report required in Condition I.J. of this permit.
- J. No monitor well may be closed without the expressed written authorization from Technical Permitting in Austin.

**VIII. CLOSURE:**

- A. LANDTREATMENT CELL CLOSURE
  - 1. Prior to commencing closure of any landtreatment cell, composite samples as described in Condition VI.C. of this permit shall be obtained from each treatment zone. These composite samples shall be analyzed, and the following constituent levels shall not be exceeded:

<u>PARAMETER</u>	<u>PRE-CLOSURE LIMIT</u>
pH (Standard Method)	6 to 10 Standard Units
Electrical Conductivity (EC) (Saturated Paste Method)	See Condition VI.B.
Sodium Absorption Ratio (SAR)	12
TPH (Method(s) Must Analyze Carbon Range up to C40+)	1 %
Metals (Total)	(mg/kg):
Arsenic	10
Barium	20,000

Cadmium	3
Chromium	100
Lead	200
Mercury	10

<u>PARAMETER (cont.)</u>	<u>PRE-CLOSURE LIMIT</u>
Selenium	5
Silver	200
Benzene (mg/kg)	5
BTEX (mg/kg)	30

2. Analytical results must be submitted within 30 days after analysis has been completed. When Technical Permitting in Austin has verified acceptable soil constituent levels, the earthen berms of the landtreatment cell shall be leveled. The treatment cell shall then be contoured and seeded with appropriate vegetation.

**B. GENERAL FACILITY CLOSURE**

1. The contents of all vessels, tanks, sumps, pits, or other containers shall be disposed of in an authorized manner.
2. Provisions shall be taken to prevent erosion both during and following closure.
3. Technical Permitting in Austin and the San Antonio District Office must be notified in writing 45 days prior to commencement of closure activities.

**IX. POST-CLOSURE CARE AND MONITORING:**

- A. The site shall be monitored for a period of no less than one (1) year after closure of the facility.
- B. Post-closure care shall include the quarterly inspections of the entire facility by a registered professional engineer for signs of deterioration.
- C. Any areas showing signs of erosion shall be contoured and backfilled or re-seeded.
- D. Annually, water from the groundwater monitoring wells shall be sampled and analyzed, and the water level measured as required by Condition VII.H.
- E. A summary of the results of the post-closure inspections and copies of all analyses required during the post-closure monitoring activity shall be submitted to Technical Permitting in Austin as part of the Semiannual Report required in Condition I.J. of this permit.

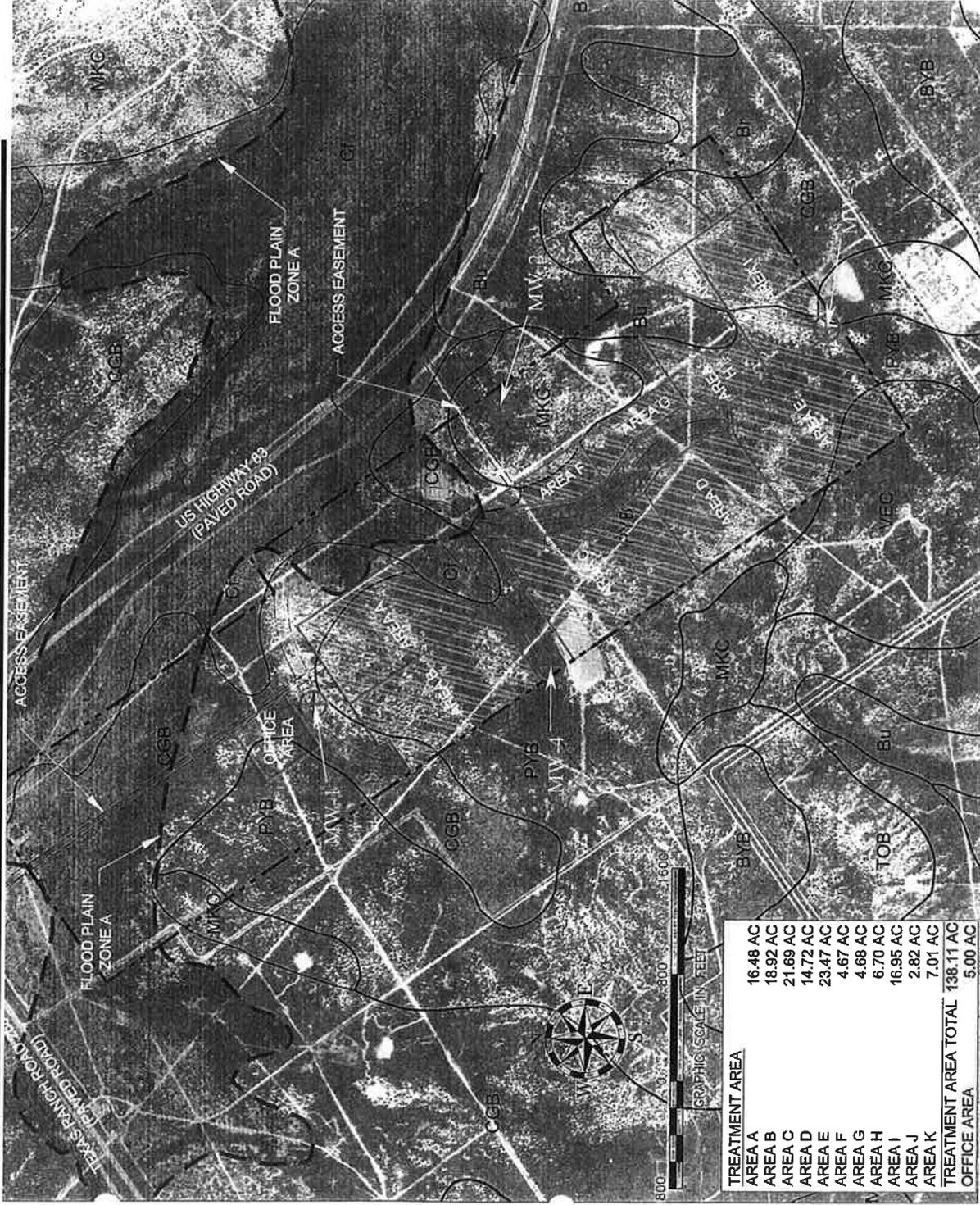
- F. The permittee must request in writing permission to cease post-closure monitoring. Post-closure monitoring requirements may be extended by Technical Permitting based on the results of the monitoring results.
- G. Upon receiving permission to cease post-closure monitoring, the monitoring wells shall be properly plugged.

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



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

# PERMIT APPENDIX A – Facility Site Plan



TREATMENT AREA	ACREAGE
AREA A	16.48 AC
AREA B	18.92 AC
AREA C	21.89 AC
AREA D	14.72 AC
AREA E	23.47 AC
AREA F	4.67 AC
AREA G	4.68 AC
AREA H	6.70 AC
AREA I	16.95 AC
AREA J	2.82 AC
AREA K	7.01 AC
<b>TREATMENT AREA TOTAL</b>	<b>138.11 AC</b>
OFFICE AREA	5.00 AC

**LEGEND:**

- LAND TREATMENT AREA
- LAND TREATMENT FACILITY BOUNDARY
- SOIL TYPE BOUNDARIES
- FEMA FLOODPLAIN ZONE A
- DIMMIT COUNTY PANEL 4807690011A
- INTERMITTENT STREAMS
- 100 FT SURFACE WATER BUFFER
- GROUNDWATER MONITOR WELL LOCATIONS