



RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

Permit No. STF-040

APEX ENVIRONMENTAL TEXAS, LLC
4137 S SHERWOOD FOREST STE 130
BATON ROUGE LA 70816

Based on information contained in your application dated October 21, 2011 and subsequent information received to date, you are hereby authorized to receive, store, handle, and treat certain oil and gas wastes as specified below at the following facility:

Apex Environmental Millett Waste Disposal Facility
J. Poitevent Survey 41
La Salle County, Texas
RRC District 01

NARRATIVE DESCRIPTION OF PROCESS:

Incoming wastes will be received into Collecting Pits 1-4, and Collecting Pit 5. The Solidification Area consists of Collecting Pits 1-4 where material is allowed to settle and separate into liquid and solid phases. Liquids will be pumped out of the pits to the Water Processing area, filtered to remove any components which may affect the function of the well, and stored in tanks prior to being sent to a permitted injection well; while recyclable liquid mud will be sent to the Recycle Mud Area of the facility. Once the fluids are pumped out of the pits, drying agents such as fly ash and cement will be added to the solid waste in the pit and mixed to dry and stabilize the material. Once solids have been stabilized, the solids will be transported to a permitted disposal facility. Recyclable liquid mud that was separated from the solid waste will be pumped from the Collecting Pits 1-4 into a dryer to remove all solids then transported to Collecting Pit 5. Recyclable mud may also be directly received in Collecting Pit 5 in the Recycle Mud Area. Waste in this area will be treated for reuse in the future drilling operations. All solids from the treatment process will be sent to Collecting Pits 1-4 where the solids will go through the stabilization process.

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

I. GENERAL PERMIT CONDITIONS

- A. This permit is effective May 8, 2013, and expires May 7, 2018.
- B. This permit may be considered for administrative renewal upon request and subsequent review by the Commission.

- C. This permit is nontransferable without the consent of the Commission.
- D. No waste may be received at the referenced facility until financial security in the amount of \$381,754.92 for the Apex Environmental Millett Waste Disposal Facility, including the associated five (5) associated collecting pits covered under Pit Permit Nos. P011732, P011733, P011734, P011735, and P011737, and the washout pit covered under Pit Permit No. P011736, is provided to and approved by the Commission.
- E. No waste may be received at the referenced facility until a restrictive covenant is signed by a representative of Apex Environmental Texas, LLC, the landowner, and a representative of the Railroad Commission of Texas; and the signed document is filed in the Real Property Records of La Salle County, Texas, and proof of filing with La Salle County is submitted to the Commission.
- F. No waste may be received at the referenced facility until the monitor wells required by Condition VIII have been completed and the documentation required by Condition VIII.A have been provided to and approved by Technical Permitting.
- G. The permittee shall make all records available for review and/or copying during normal business hours upon request of Commission personnel.
- H. All laboratory analyses required to be performed by Condition VIII.B shall be performed by an independent laboratory neither owned nor operated by the permittee.
- I. Failure to comply with any provision of this permit will be cause for modification, suspension, or termination of this permit.
- J. The permittee shall submit a Quarterly Report containing the applicable information required in Conditions III, IX.B, and VIII.B of this permit. The first Quarterly Report shall cover the period beginning on the effective date of the permit and ending June 30, 2013. The reporting periods shall thenceforth be July 1 through September 30, October 1 through December 31, January 1 through March 31, and April 1 through June 30 of each year.

The Quarterly Reports shall be submitted to Technical Permitting in Austin and the San Antonio District Office no later than the 31st day of the month following each reporting period, or each January 31st, April 30th, July 31st, and October 31st, respectively.

II. INCOMING WASTES

A. AUTHORIZED WASTES

- 1. Only RCRA exempt or RCRA characteristically non-hazardous wastes subject to the jurisdiction of the Railroad Commission of Texas may be received or processed at this facility. This permit authorizes the receipt of only the following oil and gas wastes:
 - a. Oil based drilling fluids and associated cuttings;

- b. Contaminated soils from RCRA exempt crude oil spills, gathering pipeline, and saltwater spills;
 - c. Formation sands and other solids from saltwater storage tanks or vessels and non-commercial saltwater pits;
 - d. Production tank bottoms which do not exceed 7% in oil content as determined by a Standard API Shakeout;
 - e. Liners from non-commercial reserve and washout pits;
 - f. Saltwater (produced brine or produced water);
 - g. Completion, workover, and stimulation fluids;
 - h. Produced formation fresh water;
 - i. Rainwater from firewalls, ring levees, and pits at drilling and production facilities;
 - j. Washout pit water and residual solids;
 - k. Non-hazardous natural gas plant processing waste;
 - l. Pipeline test water which does not meet discharge limitations;
 - m. Crude oil spill clean-up waste.
2. This permit does not authorize the reclamation of crude oil from oil and gas waste. A request for authorization under Statewide Rule 57 must be submitted to Technical Permitting in Austin prior to any reclamation activities at the referenced facility.
 3. No oil and gas NORM (Naturally Occurring Radioactive Material) waste defined in 16 TAC §4.603 or waste from a facility that is licensed by the Texas State Health Services to process or treat oil and gas NORM waste may be received at this facility.
 4. No waste may be received 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 at the facility.

B. TESTING REQUIREMENTS FOR INCOMING WASTES

1. 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.)
2. 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 naturally occurring radioactive material (NORM) using a scintillation meter with a sodium iodide detector. Any load with a maximum reading of 50 microrentgens 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.

3. Prior to receipt at the site, representative samples of waste from commercial oil and gas 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

III. RECORDKEEPING REQUIREMENTS

- A. 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:
 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. Amount of waste material (specify units); 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.2 above.
- B. The permittee shall maintain the following records on each load of outgoing waste sent from the referenced facility to an authorized disposal facility or for reuse for a period of three (3) years from the date of shipment:
 1. Description of the facility to where the waste is sent to for disposal, including:
 - a. Disposal operator name;
 - b. Disposal permit number; and
 - c. County
 2. Name of transporter;
 3. Amount of waste material (specify units); and
 4. A detailed description of the type of waste material.
- C. A report of all records required by Conditions III.A. and III.B. above, as well as a summary of waste receipts including the volume of each type of material received on a monthly basis shall be submitted to Technical Permitting in Austin and the San Antonio District Office as part of the Quarterly Report required in Condition I.I. of this permit.

IV. GENERAL SITE CONSTRUCTION AND MAINTENANCE REQUIREMENTS

- A. The general layout and arrangement of the facility shall be consistent with the site plan dated June 13, 2012 and November 8, 2012 which is attached to and incorporated as part of this permit as **Permit Appendix A**.
- B. A sign shall be posted at each entrance to the facility, which shall show the permit number in letters and numerals at least one-inch in height.
- C. Fly ash and cement used in the treatment process shall be stored in vessels designed for the safe storage of the particular chemical. These vessels shall be maintained in a leak-free condition. Requests to use any other chemicals in the treatment process shall be submitted to and approved by Technical Permitting in Austin prior to use.
- D. The Water Processing/Solidification Area shall consist of the following equipment:
- 3-400 Barrel Steel Cone Bottom Tanks;
 - 3-400 Barrel Fiberglass Process Tanks;
 - 6-400 Barrel Fiberglass Processed Water Storage Tanks;
 - 1-125 Barrel Fiberglass Body Feed Tank (DE);
 - 1-125 Barrel Fiberglass Pre-Coat Tank (DE);
 - 1-400 Barrel Fiberglass Skim Oil Storage Tank; and
 - 1-500 Barrel Fiberglass Gun Barrel Tank.
- E. The Recycle Mud Area shall consist of the following equipment:
- 5-300 Barrel Steel Recycle Mud Processing Tanks;
 - 2-400 Barrel Steel Mud Storage Tanks;
 - 2 Centrifuges; and
 - 1 Dryer.
- F. Any pits and/or buried tanks shall be permitted in accordance with Statewide Rule 8.
- G. All untreated waste shall be contained in tanks or in permitted pits. All pits and tanks shall be maintained in a leak-free condition.
- H. The liner system of the Water Processing/Solidification Area and the Recycle Mud Area must be installed as represented in the November 8, 2012 application submittal. Eight (8) inches of concrete must line the entire Water Processing/Solidification Area and Recycle Mud Area. A cushion layer composed low-plasticity clay soils or sands, must be installed at least twelve (12) inches thick below the concrete. Below the cushion layer, the Water Processing/Solidification Area and the Recycle Mud Area must be lined with a primary and a secondary high density polyethylene (HDPE) liner with a thickness of at least 60 mils. The permittee shall notify the San Antonio District office at least 48 hours prior to liner installation.
- I. The Water Processing/Solidification Area and the Recycle Mud Area must be equipped with a leak detection system to detect leaks in the primary liner. A geonet must be placed between the HDPE primary and secondary liners to detect leaks in the primary liner. The geonet layer must have a transmissivity of 2×10^{-3} cm/sec.

- J. The liners and leak detection system must be installed in accordance with the liner manufacturer's specifications and sound engineering practices.
 - K. All above ground tanks containing untreated waste shall be contained within a concrete berm at least one (1) foot tall. The liner must be installed according to accepted, standard industry practices.
 - L. The perimeter of the property shall be enclosed with a fence suitable to keep out unauthorized access to the extent where terrain and/or vegetation prohibit access to the facility. The site is to be attended continuously or secured when unattended.
 - M. Any spill of waste, treating chemical, or any other material shall be immediately cleaned up and processed through the treatment process or disposed of in an authorized manner.
 - N. Spills contained on the concrete liner within the one (1) foot tall concrete berm surrounding the storage tanks, processing tanks, centrifuges, dryer, and all other equipment shall be immediately removed and processed through the treatment process or disposed of in an authorized manner.
 - O. This facility shall conform to all Texas Commission on Environmental Quality (TCEQ) air quality rules and regulations.
- V. COLLECTING PITS 1-4 (P011732, P011733, P011734, P011735) CONSTRUCTION AND OPERATION
- A. Use of the Collecting Pits (Permit Nos. P011732, P011733, P011734, P011735) is limited to the collection of oil and gas waste as described in Condition II.A.1 of this permit. No other oil and gas waste may be stored in this pit.
 - B. The Collecting Pits shall be constructed in accordance with the design shown in the June 13, 2012 and November 8, 2012 submittals. The bottom of the pits shall be constructed of concrete at least eight (8) inches thick. The walls of the pits shall be constructed of concrete at least six (6) inches thick. Use of the pits to contain oil and gas waste may not commence until the San Antonio District Office inspects the installed liner and Technical Permitting in Austin approves the use of the pit.
 - C. The capacity of each of the Collecting Pits may not exceed 642 barrels.
 - D. At least 2 foot of freeboard must be maintained between the fluid level in the pits and the top of the pits.
 - E. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pit shall be in accordance with the information represented on the application (Form H-11) and attachments thereto.
 - F. A sign shall be posted at the pit, which shall show the pit permit number in numerals at least one inch in height.
 - G. This permit does not authorize the discharge of any oil and gas waste from the pit.
 - H. The pit must be dewatered, emptied, backfilled, and compacted within 120 days of final cessation of use of the pit. Final closure of the pit must be accomplished in such a manner that rainfall will not collect at the pit location after pit closure. Upon final closure, Technical Permitting in Austin and the San Antonio District Office

shall be notified in writing.

VI. WASHOUT PIT (Permit No. P011736) CONSTRUCTION AND OPERATING CONDITIONS

- A. Use of the Washout Pit (Permit No. P011736) is limited to the storage of oil and gas waste residue washed out from trucks and tanks. No other oil and gas waste may be stored in this pit.
- B. The Washout Pit shall be constructed in accordance with the design shown in the June 13, 2012 and November 8, 2012 submittals. The bottom of the pit shall be constructed of concrete at least eight (6) inches thick. The walls of the pit shall be constructed of concrete at least six (6) inches thick. Use of the pit to contain oil and gas waste may not commence until the San Antonio District Office inspects the installed liner and Technical Permitting in Austin approves the use of the pit.
- C. The capacity of the Washout Pit may not exceed 2,200 barrels.
- D. At least 2 foot of freeboard must be maintained between the waste level in the pit and the top of the pit.
- E. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pit shall be in accordance with the information represented on the application (Form H-11) and attachments thereto.
- F. A sign shall be posted at the pit, which shall show the pit permit number in numerals at least one inch in height.
- G. This permit does not authorize the discharge of any oil and gas waste from the pit.
- H. The pit must be dewatered, emptied, backfilled, and compacted within 120 days of final cessation of use of the pit. Final closure of the pit must be accomplished in such a manner that rainfall will not collect at the pit location after pit closure. Upon final closure, Technical Permitting in Austin and the San Antonio District Office shall be notified in writing.

VII. COLLECTING PIT 6 (Permit No. P011737) CONSTRUCTION AND OPERATING CONDITIONS

- A. Use of the Collecting Pit (Permit No. P011737) is limited to the storage of recyclable drilling mud and cuttings. No other oil and gas waste may be stored in this pit.
- B. The Collecting Pits shall be constructed in accordance with the design shown in the June 13, 2012 and November 8, 2012 submittals. The bottom of the pits shall be constructed of concrete at least eight (6) inches thick. The walls of the pits shall be constructed of concrete at least six (6) inches thick. Use of the pits to contain oil and gas waste may not commence until the San Antonio District Office inspects the installed liner and Technical Permitting in Austin approves the use of the pit.
- C. The capacity of the Collecting Pit may not exceed 1,616 barrels.
- D. At least 2 foot of freeboard must be maintained between the waste level in the pit and the top of the pit.

- E. Unless otherwise required by conditions of this permit, construction, use, and maintenance of the pit shall be in accordance with the information represented on the application (Form H-11) and attachments thereto.
- F. A sign shall be posted at the pit, which shall show the pit permit number in numerals at least one inch in height.
- G. This permit does not authorize the discharge of any oil and gas waste from the pit.
- H. The pit must be dewatered, emptied, backfilled, and compacted within 120 days of final cessation of use of the pit. Final closure of the pit must be accomplished in such a manner that rainfall will not collect at the pit location after pit closure. Upon final closure, Technical Permitting in Austin and the San Antonio District Office shall be notified in writing.

VIII. MONITOR WELLS

A. Three (3) monitor wells must be installed and numbered as represented on **Permit Appendix B**.

- 1. The wells must be completed in accordance with 16 TAC Part 4, Chapter 76 (Water Well Drillers and water Well Pump Installers).
- 2. The wells must be completed in 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 the top of the groundwater.
- 4. Provision must be made to protect the well heads from damage by vehicles and heavy equipment.
- 5. The following information must be submitted after the wells are completed:
 - a. 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.
 - b. A well installation diagram for each well.
 - c. A survey elevation for each well head reference point.
 - d. A potentiometric map showing static water levels and the calculated direction of groundwater flow.

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

- | | |
|------------------------|---------------|
| 1. Static water level. | 8. Nitrates |
| 2. Benzene | 9. Carbonates |
| 3. TPH | 10. Calcium |
| 4. TDS | 11. Magnesium |
| 5. Chlorides | 12. Sodium |
| 6. Bromides | 13. Potassium |
| 7. Sulfates | |

Copies of the results must be filed with Technical Permitting as part of the Quarterly Report required in Condition I.I of this permit.

IX. LEAK DETECTION SYSTEM MONITORING AND REPORTING

- A. The leak detection system shall be checked weekly and the permittee must maintain a record of when the liner and the leak detection system are inspected and the results of each inspection. This record must be maintained by the permittee for the life of the pit, and upon request of the Commission, the record shall be filed with the Commission.
- B. Results of leak detection system monitoring shall be submitted to Technical Permitting in Austin and to the San Antonio District Office as part of the Quarterly Report required in Condition I.I. of this permit.
- C. If the leak detection system indicates liner failure, the District Office must be notified of that fact within 24 hours of detection of liner failure. Liner system failure is defined as any of the following:
 - a. A leak rate from the primary liner greater than 760 gallons per day for the Water Processing/Stabilization Area or 210 gallons per day for the Recycle Mud Area.
 - b. Any failure in the leak detection and return system or any component thereof.
 - c. Any detected damage to or leakage from the secondary liner.
- D. Technical Permitting in Austin and the San Antonio District Office must be notified within 24 hours if the leak detection system indicates liner failure.
- E. If a liner system failure is detected, the process of draining and emptying the pits must begin within 10 days of the detection of liner failure, and inspection of the affected component for deterioration and leaks must begin within 30 days. After inspection, the affected component must be replaced or repaired before use of the pit is resumed.

X. STORMWATER CONTROL

- A. This permit does not authorize the discharge of oil and gas waste or stormwater that has come into contact with oil and gas waste.
- B. Stormwater dikes must be constructed around the Water Processing/Stabilization Area and the Recycle Mud Area. The dikes must be constructed with concrete to a minimum height of twelve (12) inches. Any road(s) traversing the dikes may not compromise the integrity of the dikes' ability to control stormwater.
- C. Stormwater collected in the treatment facility area must be disposed of in an authorized manner.
- D. A discharge permit from the Environmental Protection Agency (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.

XI. CLOSURE OF THE SITE

A. Closure of the Apex Environmental Millett Waste Disposal Facility shall proceed as follows:

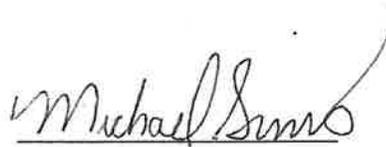
1. All waste must be processed through the facility or disposed of in an authorized manner. No waste may be permanently disposed of at this facility.
2. The contents of all containment areas, tanks, vessels, or other containers shall be disposed of in an authorized manner.
3. All treatment equipment shall be removed and salvaged, if possible, or disposed of in an authorized manner.
4. All monitor wells shall remain unplugged and monitoring reporting requirements remain effective until written approval from Technical Permitting in Austin is granted for plugging the monitor wells.
5. After waste removal and site excavation are completed, representative soil samples shall be obtained from around the location of the treatment facility as indicated in the application submittal dated June 13, 2012. These composite samples shall be analyzed and the following constituent levels shall not be exceeded:

Constituent (units)	Closure Limit
pH (s.u.)	6.0 to 10.0
Electrical Conductivity (mmhos)	4.0
TPH (mass %)	<1
BTEX (mg/kg)	30.0
Constituent (units)	Closure Limit
Metals (mg/kg):	
Arsenic	10.0
Barium	10000.0
Cadmium	10.0
Chromium	100.0
Lead	200.0
Mercury	10.0
Selenium	10.0
Silver	200.0

6. A map showing the sampling locations and copies of the analysis shall be submitted to Technical Permitting in Austin. When acceptable constituent levels have been verified in writing by Technical Permitting, the earthen berms shall be leveled to grade. Topsoil shall then be contoured and seeded with appropriate vegetation.
7. Provision shall be taken to prevent erosion both during and following closure activities.

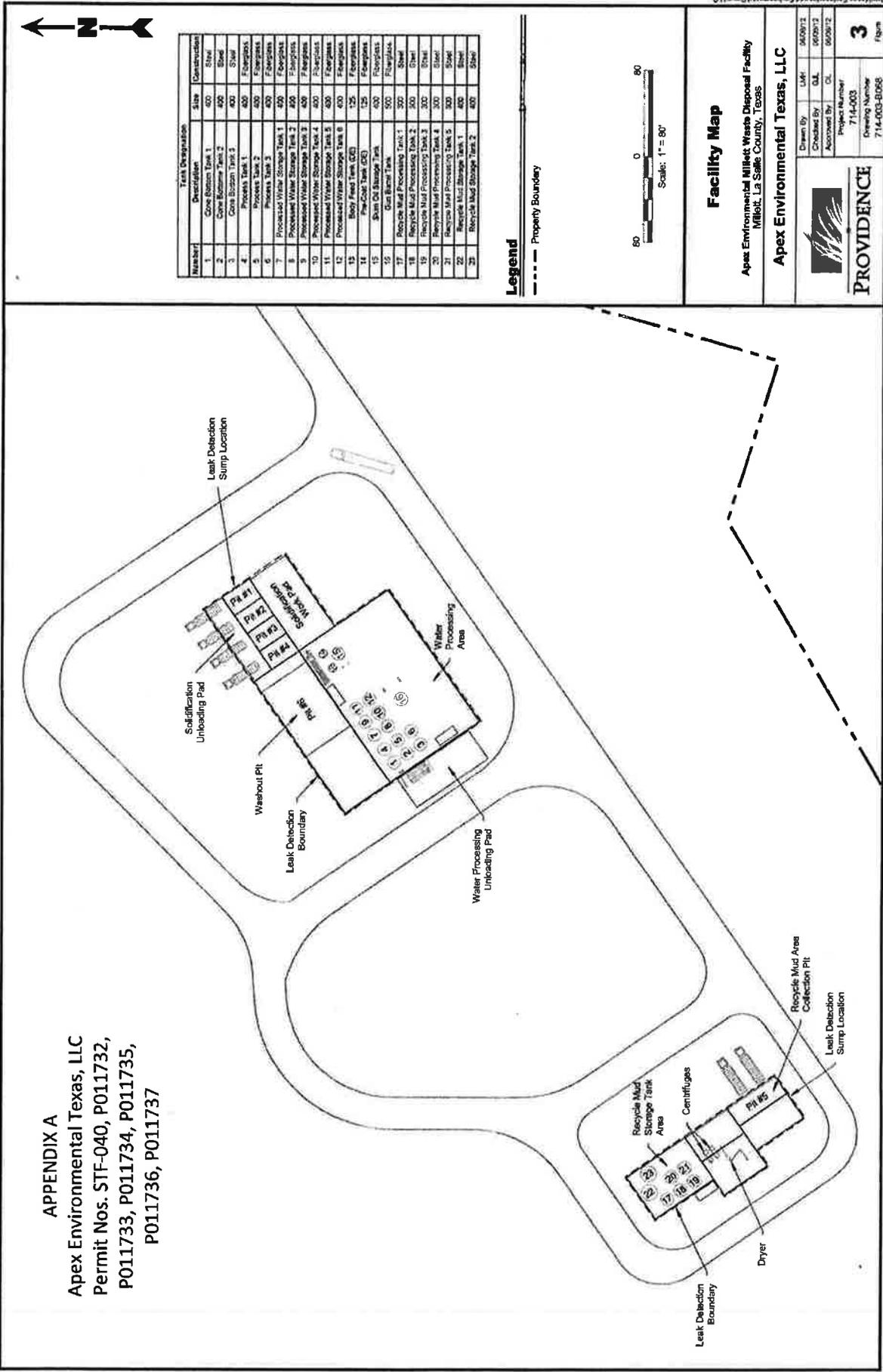
- B. Technical Permitting and the San Antonio District Office shall be notified in writing at least 45 days prior to commencement of closure activity so that the Commission may monitor closure to assure compliance with the closure plan. Closure activities shall be performed in accordance with the information contained in the permit application.

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

A handwritten signature in cursive script, appearing to read "Michael Sims".

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

APPENDIX A
Apex Environmental Texas, LLC
Permit Nos. STF-040, P011732,
P011733, P011734, P011735,
P011736, P011737



Number	Description	Size	Construction
1	Cone Bottom Tank 1	400	Steel
2	Cone Bottom Tank 2	400	Steel
3	Cone Bottom Tank 3	400	Steel
4	Process Tank 1	400	Fiberglass
5	Process Tank 2	400	Fiberglass
6	Process Tank 3	400	Fiberglass
7	Process Tank 4	400	Fiberglass
8	Process Tank 5	400	Fiberglass
9	Process Tank 6	400	Fiberglass
10	Process Tank 7	400	Fiberglass
11	Process Tank 8	400	Fiberglass
12	Process Tank 9	400	Fiberglass
13	Process Tank 10	400	Fiberglass
14	Process Tank 11	400	Fiberglass
15	Process Tank 12	400	Fiberglass
16	Process Tank 13	400	Fiberglass
17	Process Tank 14	400	Fiberglass
18	Process Tank 15	400	Fiberglass
19	Process Tank 16	400	Fiberglass
20	Process Tank 17	400	Fiberglass
21	Process Tank 18	400	Fiberglass
22	Process Tank 19	400	Fiberglass
23	Process Tank 20	400	Fiberglass

Legend
 - - - - - Property Boundary

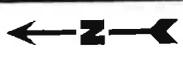


Facility Map

Apex Environmental Millett Waste Disposal Facility
 Millett, La Salle County, Texas

Apex Environmental Texas, LLC

Drawn By:	UMI	06/09/12
Checked By:	DL	06/09/12
Approved By:	DL	06/09/12
Project Number:	714-003	
Drawing Number:	714-003-ED06	
3	Figures	



APPENDIX B
 Apex Environmental Texas, LLC
 Permit Nos. STF-040, P011732,
 P011733, P011734, P011735,
 P011736, P011737

Legend

- Property Boundary
- ◆ Boring Location (Piezometer)
- Injection Well Location (Proposed)
- Monitor Well Location (Proposed)
- 445 --- Potentiometric Contour, FT
- 446 --- Potentiometric Contour, FT
- 447 --- Potentiometric Contour, FT
- Groundwater Flow Direction
- (442-45) Groundwater Elevation, FT

Reference

Base map comprised of 2010 aerial photograph from
 USDA/FSA-Aerial Photography Field Office



**Proposed Monitor Well Location and
 Potentiometric Surface Map**

Apex Environmental Milliet Waste Disposal Facility
 Milliet, La Salle County, Texas

Apex Environmental Texas, LLC



PROVIDENCE

Drawn By	LAM	06/09/12
Checked By	JTM	06/09/12
Approved By	G.L.	06/20/12
Project Number	714-003	
Drawing Number	714-003-0056	

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