OVERVIEW OF CLOSURE PLANS FOR MUNICIPAL WWTPS

J. Alfonso Martinez III, Permit Writer for the Municipal Permits Team

Closure Plan Steps and Types

Closing Wastewater Lagoons, Sludge Drying Beds and Package Plants
What is the procedure?

If you plan to conduct a clean closure, or close a unit in place as a landfill, the following steps must be taken:

Step 1. Develop a Closure Plan addressing the required information detailed on the *Closure Plan for Wastewater Plant Units Checklist* (12 requirements). No soil analyses are to be performed at this time, simply define how and where the soil grab samples will be taken. Include to-scale maps depicting the grab sample area.

Step 2. Ninety (90) days prior to any closure activity, Submit three (3) copies of the Closure plan to:

Texas Commission on Environmental Quality
Municipal Permits Team (MC-148)
P.O. Box 13087
Austin, Texas 78711-3087

Step 3. The TCEQ Municipal Permits Team will review the plan (turnaround is usually within 30 days from receiving the request).

- If additional information is required, you will be notified by the TCEQ
- If no additional information required, then an approval letter will be sent to you from the TCEQ approving the Closure Plan

- Clean Closure
- Closure in place

Closure Plan Steps and Types

Step 4. After approval is received from TCEQ, you may proceed with the closure activities as approved in the submitted Closure Plan.

Step 5. Submit 3 copies of the Final Closure Report to the Municipal Permits Team.
After the closure procedure is completed, a Registered Professional Engineer must sign and submit a completion notice to the TCEQ. This completion notice becomes the **Final Closure Report** that discusses what actions were taken during the closure of the lagoons, sludge drying beds, or package plant, along with copies of all laboratory analytical data (soils analyses and TCLP analyses of the sludge from the lagoon). The Final Closure Report must include the same address as the Closure Plan.

Step 6. The **Final Closure Report** will be forwarded by the Municipal Permits Team to the TCEQ Environmental Cleanup Section, who will review the report and determine if the site requires remediation under the Texas Risk Reduction Program (TRRP). After review by the TCEQ Environmental Cleanup Section, you will receive notification from TCEQ.

- If further action is necessary, you will be advised what actions are to be taken.
- If no further action is required, you will receive a **Final Closure Letter** from TCEQ.

If you plan to leave materials in place, or close a unit in place as a landfill (mostly pertaining to package plants), then the site must be **deed recorded** and must include the soil contaminant levels.

*****If you have any questions, please contact the Municipal Permits Team at (512) 239-4671*****

Updated 8/12/2009

- Clean Closure
- Closure in place

Closure Plan Checklist

CLOSURE PLAN CHECKLIST FOR DOMESTIC WASTEWATER TREATMENT PLANT UNITS

Background Information for Proposed Closure:

1. **Historical use of the lagoon / structure:** Include date of construction, timespan over which the lagoon or structure was in service and date of last discharge of waste into that lagoon or structure.

2. **Procedures used for the closure of the lagoon / structure:** Describe the procedures necessary to complete closure of the lagoon or structure including a description of each activity such as determination of thickness of both the residual waste and contaminated soil beneath the waste.

3. **Time table for closure:** Submit in the form of a schedule indicating the beginning date, approximate duration and ending date for each step in the closure process.

4. **Estimated volume of wastes in lagoon / structure:** Volume of wastes in lagoon or structure should be estimated by documenting the thickness of waste at a sufficient number of locations within the lagoon or structure to calculate this volume.

Closure Plan Checklist

Map Attachments:

1. **Vicinity Map:** General Highway (county) map clearly identifying the facility location.

2. **Site Map (to scale):** The plant layout, boundaries, soil sampling points, all affected treatment units, all water wells, and surface water bodies.

3. **Soil Map:** Site boundaries should be shown on a USDA Natural Resources Conservation Service (NRCS) Soil Map labeling all soil types.

4. **Lagoon / structure cross section:** Vertical cross section showing dimensions of lagoon or structure.

Closure Plan Checklist

Analytical Data:

1. **Sampling and analysis of waste:** Samples of waste should be collected so as to obtain a representative composite sample of the waste remaining in the lagoon or structure prior to closure* Analysis of this representative sample should include the following:

   Pollutants:

   - Arsenic
   - Cadmium
   - Copper
   - Lead
   - Mercury
   - Nickel
   - Selenium
   - Zinc

   Additional parameters:

   - Nitrates
   - Nitrites

   This will be used as a benchmark against which to evaluate effectiveness of efforts to remove the wastes and contaminated subsoil.

Closure Plan Checklist

2. **Sampling and analysis of background soil and each soil depth increment below the lagoon /structure:** Sampling of both background soil and soil below the lagoon should be collected so as to obtain a representative composite sample of background soil and each depth increment collect from below the lagoon or structure. *Analysis of background soil samples and soils below the lagoon or structure should include should include all the analytical parameters No. 1 of this subsection along with pH levels.

Based on the size of the sample area, representative samples of the waste and soil should be collected by first collecting samples from at least 5 to 10 locations for the soil below the lagoon/structure, and 3 to 5 locations of the background soil that are each combined into a single composite sample of the waste and each depth increment of the soil. Soil below the lagoon/structure and the background area should be collected in 0-6"and 6-24" depth increments.

Approved analytical test methods for soil and waste can be obtained from the current edition of U.S. EPA, *Test Methods for Evaluating Soil Waste-Physical/Chemical Methods, SW-846.* Information on analytical procedures for nutrients and other significant agronomic parameters can be obtained from Texas A&M University Soil and Water Testing Laboratory (979) 845 4816. These methods or an equivalent method approved by TCEQ, must be used to verify decontamination objectives.

If you are closing a package plant that exists on top of a concrete slab, and there is evidence of cracking or damage to the concrete base or any type of spillage of waste around the treatment system, then soil samples are to be taken within that area to evaluate any possible seepage of waste into the soil.

If you plan to close a package plant, holding tank or lagoon system by burying the structural components of the treatment system and/or concrete base (closure in place as a landfill), all of the material must be disinfected prior to the final closing process. Also, any material that is buried on site must be recorded in the deed of record.

Updated 4/30/2018

J. ALFONSO MARTINEZ III,

MUNICIPAL PERMIT WRITER

JOSE.MARTINEZ@TCEQ.TEXAS.GOV

(512) 239-4668