

**Part III
Attachment III-B**

GENERAL FACILITY DESIGN

**Pescadito Environmental Resource Center
MSW No. 2374
Webb County, Texas**

PESCADITO
ENVIRONMENTAL RESOURCE CENTER

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responsibility to reject loads that contain prohibited wastes. These personnel will also have the authority to have prohibited waste removed by the transporter immediately upon discovery.

Figure III-B.1-2 is a flow diagram that illustrates the storage, processing, and disposal sequences for the various materials to be accepted. Figure III-B.1.2 depicts a plan view of the storage and processing units. Schematic details of the storage and processing units are depicted on Figures III-B.1.3 through 6. The figures include generalized construction details of slab and subsurface components for each processing or storage unit.

2.1 Waste Disposal

The landfill liner, leachate collection system, final cover system, run-on/run-off system, and any other component that will be used in the construction and operation of the municipal solid waste facility that is necessary for the protection of human health and the environment will meet all applicable Subtitle D requirements and TCEQ regulations and guidelines. Provisions addressing design and construction are addressed in the liner quality control plan (Appendix III-D.7), the leachate and contaminated water management plan (Appendix III-D.6), alternate final cover design (Appendix III-D.8), and the final cover quality control plan (Appendix III-D.9).

The waste disposal area will be excavated with side slopes no steeper than approximately 3 Horizontal to 1 Vertical (3H:1V). The liner system will be constructed following excavation of each waste disposal area. The proposed liner system for the facility is described below with layers listed from top to bottom.

SUBTITLE D COMPOSITE LINER SYSTEM

24-inches protective soil cover	On-site soil
Drainage geocomposite (200 mil minimum)	Geotextile on both sides
60-mil HDPE liner, or Bentonite Enhanced 60-mil HDPE Liner	Textured on bottom and side slopes
24-inches compacted soil liner for MSW cells ¹ 36-inches for Class 1 waste cells	Maximum hydraulic conductivity = 1×10^{-7} cm/sec
¹ <u>all cells are designated to receive Class 1 wastes. PERC reserves the right to modify the permit in the future to designate cells to receive only MSW; upon approval only 24-inches of compacted soil liner will be used along with the other components listed</u>	

Information regarding materials and construction quality assurance are included in Part III,

disposed above the class 1 waste provided four feet of clay-rich soil is compacted on top of the class 1 waste prior to subsequent filling above.

2.3 Liquid Solidification

Liquids to be managed at the facility such as off-specification liquids, grease trap waste, grit tarap waste, sludges that do not pass the paint filter test, etc., will be identified at the scale house and directed to the liquid solidification area. The solidification basin will either be placed above a lined disposal cell or will contain a separate lined area beneath as shown on Figure III-B.1-5. Liquids will be delivered to the basins and discharged. Bulking agents such as on-site soil, sawdust, kiln dust, coal combustion residuals, auto-fluff or other inert materials with absorptive capacity will be mixed with the liquids until the resulting mixture passes the paint filter test and any other requirements outlined for the specific material. Once the liquids have been solidified, it will be transported and disposed in the appropriate waste disposal unit.

Odor control will provide at the Liquid solidification areas through rapid processing of any odorous liquids received, the large buffers provided at the facility and distance to nearby receptors. Other measures that may be employed include the use of misters utilizing odor neutralizing compounds, pending approval of a permit modification. Should these measures not prove adequate and odors are confirmed to be migrating off site, liquid wastes that have an offending odor will not be accepted.

2.4 RACM

Regulated asbestos-containing material (RACM) may be accepted for disposal at the facility as defined in 40 Code of Federal Regulations Part 61 in accordance with the provisions of 30 TAC §330.171(c)(3). PERC is providing written notification to the executive director of the intent of the facility to accept RACM. The landfill, in accordance with §330.171(c)(3)(A), dedicates all of the landfill units (or cells) to potentially receive RACM. When RACM is accepted, a separate RACM unloading and disposal area will be provided. The exact area to be used will be consistent with the expected rate of incoming material, while allowing for safe and efficient operation of vehicles and equipment. After unloading, the RACM waste will be covered with a minimum of three feet of other solid waste or one foot of earthen material. If the deposited RACM is covered with other solid waste, daily cover consisting of a minimum of six inches of soil will be placed over the deposited wastes at the end of each working day. Specific instructions on the acceptance and handling of RACM are provided in Part IV – Site Operating Plan.

2.5 Large Item and Tire Storage Areas

A storage area for large items, white goods and tires may be provided near the active working face, or may be provided at a location near the citizen's convenience center. Large items and

continuously be reused for site operations, there is no time limit on their storage.

2.7 Citizen's Convenience Center

A citizen's convenience center for waste and recyclables drop-off will be located within the site entrance facilities, as shown on Figure III-B.1-2 and 3. Thirty to forty-cubic yard roll-off containers will be provided for the receipt of waste and recyclables from smaller haulers. Full roll-off containers will be emptied at the active working face at the end of each day and containers that are not full will be covered with a tarp or similar device at the end of each day when rain is expected to prevent the accumulation of rainfall and to minimize the generation of contaminated water. The elimination of contaminated water also minimizes the potential for generating odors. Containers holding recyclable materials will be periodically transported to a reuse or recycling facility. Large items, white goods and tires may be stored near the citizen's convenience center in roll-off containers or on the ground and will be periodically transported to an appropriate recycling facility.

2.8 Leachate Storage Facility

The primary leachate storage for the facility will be provided by the leachate sumps, which are located within each landfill cell. Leachate will be pumped from the sumps through a leachate force main, or hauled via truck to the leachate storage facility. The leachate storage facility will be located as shown on Figure III-B.1-2. The storage facility will consist of two 15,000-gallon (minimum) storage tanks and/or an evaporation pond. The tanks will be equipped with tops and additional odor control measures will not be required. The secondary containment area provides containment, with 12 inches of freeboard, for volume from one leachate storage tank and precipitation from the 25-year, 24-hour storm event or 110 percent of the volume from one leachate storage tank. Refer to Part III, Appendix III-D.6 - Leachate and Contaminated Water Plan for secondary containment volume calculations.

The evaporation pond, if constructed will contain ~~at the same~~ composite bottom liner (3-foot compacted soil liner with a permeability less than or equal to 1×10^{-7} cm/sec and 60 mil HDPE) ~~as the class 1 waste cells~~, if leachate from the class 1 cells will be deposited there. If a permit modification is approved to construct cells for only MSW and only leachate from the MSW cells is deposited in the pond, then the liner for the pond may ~~Otherwise it will~~ be the same as the MSW cells. Either option will be constructed in accordance with the Liner Quality Control Plan. The depth of the pond will be limited to 2-feet, so that there will always be one-foot of freeboard for the 25-year, 24-hour storm event and only one-foot of contaminated water over the liner. Contaminated water, leachate and gas condensate in the storage tanks will be transferred by pump or truck to the evaporation pond when there is capacity.

3.0 SANITATION

The solid waste processing and storage units include the large item storage area, reusable materials staging area, liquid stabilization area, citizen's convenience center and leachate storage facility. Refer to Section 2 – Waste Movement for a discussion of each of the solid waste processing and storage units.

Each of the solid waste processing and storage units have been designed to facilitate proper cleaning. This includes controlling surface water drainage in the vicinity of each of the units to prevent surface water run-off onto, into, or off these areas.

3.1 Large Item and Tire Storage Areas

Large items, white goods and tires received at the facility are transferred into roll-off containers for temporary storage. Each roll-off container is covered with a tarp or similar device when rain is expected to prevent the accumulation of rainfall. The containers will be cleaned by removing loose material for disposal at the working face and washing down the containers with water, if needed. Wash water will be treated as contaminated water and disposed of in accordance with the Leachate and Contaminated Water Plan (Appendix III-D.6).

3.2 Reusable Materials Staging Area

Reusable materials received include inert materials to be stockpiled and reused for site operations. Since these materials are inert, surface water run-on and run-off controls are not required, and there is no requirement for additional sanitation controls.

3.3 Citizen's Convenience Center

The citizen's convenience center will receive municipal solid waste and recyclable materials from the public and small haulers. Any waste received will be loaded into roll-off containers. Each container is covered with a tarp or similar device to prevent the accumulation of rainfall when rain is expected and full containers will be transported and emptied at the working face. Containers will be cleaned as needed by washing down the containers with water or by the use of high pressure steam. The citizen's convenience center is constructed of reinforced concrete and/or asphalt. Should waste materials spill onto the surface, the materials will be picked up and disposed of at the working face. The surfaces will be cleaned as needed by washing down with water. Wash water from the roll-off containers or surfaces will be contained by mountable curbs around the facility and treated as contaminated water

4.0 ENDANGERED SPECIES PROTECTION

A biological assessment (BA) of threatened and endangered species at the Pescadito Environmental Resource Center has been conducted by aci consulting. There are five federally listed, threatened or endangered species in Webb County. These are the jaguarondi, ocelot, interior least tern, ashy dogwood and Johnston's frankenia. The BA concluded there would be "no effect" for the ocelot, interior least tern, ashy dogwood and Johnston's frankenia. A "may affect, not likely to adversely affect" determination was made for the jaguarondi. Conservation measures have been proposed for the jaguarondi. As such, neither the facility nor its operation will result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause the taking of any endangered or threatened species. Coordination with the United States Fish and Wildlife Service (USFWS) and coordination with Texas Parks and Wildlife Department (TPWD) have been documented in Part II. The USFWS stated that the project complies with section 7(a)(2) of the endangered Species Act. The BA and related correspondence is included in Part II, Attachment A. Due to the findings of the BA and concurrences from the USFWS, a site specific species protection plan is not required.~~will be prepared prior to initial construction of the site.~~