III. PROJECT DESCRIPTION

A. PROJECT SUMMARY

The proposed project involves an expansion of the existing Cold Canyon Landfill (Landfill), in San Luis Obispo County, California. The applicant is proposing to expand the Landfill footprint; increase permitted tonnage limits; increase disposal capacity; expand and relocate the Resource Recovery Park, Compost Operation, and the Materials Recovery Facility; expand the hours of operation; add staff; and, construct a new entrance. The modifications have been proposed to allow the Landfill to more efficiently and effectively divert recoverable waste from the disposal area and increase disposal capacity, extending its life for 25 years to approximately 2040 (assuming eight years of disposal capacity remaining).

Many of the existing operations at the Landfill would continue as they do currently if the proposed project is approved. These existing facility operations are numerous and technically complex. As a result, this Project Description extensively details the existing operations in Section III.C., so as to provide the background necessary to allow the proposed project to be clearly and concisely described and understood in Section III.E.

B. PROJECT LOCATION

The proposed project is located at 2268 Carpenter Canyon Road (Highway 227), approximately 1.25 miles south of Price Canyon Road, six miles south of the City of San Luis Obispo, and four miles north of the City of Arroyo Grande, in the County of San Luis Obispo (refer to Figures III-1 through III-3)

The proposed project would be located on four parcels totaling approximately 209 acres. The project site is located in a relatively hilly, semi-rural area. Scattered residences, residential clusters, smaller-scale agricultural operations, and vineyards are common in the area. Prominent geographic features in the vicinity include the Santa Lucia Mountains to the east and the Edna Valley to the east and north. The actively producing Price Canyon Oilfield is located approximately one mile to the west and the Pacific Ocean is approximately four miles west. The project site is bordered on the west by Highway 227 and on the south by Patchett Road.

C. PROJECT BACKGROUND

The Landfill has been accepting non-hazardous waste since 1965. Waste disposal historically occurred in the northwest portion of the project site. At the time the Landfill received a Solid Waste Facilities permit approval in 1979, it was accepting approximately 200 tons of solid waste per day and the permitted disposal area was approximately 67 acres (ERC, 1991). As the landfill expanded, new disposal areas were developed to the south and east on what is today part of the project site.

In 1991, the County of San Luis Obispo prepared a Solid Waste Facility Siting Study "to assess the need for and potential locations of solid waste processing and disposal facilities to meet the disposal need of the county over the next 30 years." Various solid waste management configurations were assessed in the study, including countywide and regional configurations. The study recommended that the County pursue (or continue) a regional approach. The county

was broken into three regions based on terrain, location of waste production areas (i.e., urbanized areas), and location of transportation infrastructure. The Landfill is located in the Coastal Region, which includes communities from San Simeon to Nipomo and the City of San Luis Obispo. The study ranked potential landfill sites including ones near Gragg Canyon in Pismo Beach, Ontario Road in San Luis Obispo, and the existing Landfill site. Siting criteria included haul distances, visual resources, landslide potential, and topography, among others. The Cold Canyon Landfill site ranked third of the 23 sites reviewed. The study suggested that the County give first consideration to the top eleven sites.

At the same time the Siting Study was being prepared, an expansion of the Landfill was proposed, and in 1991 permit approval was granted by the County of San Luis Obispo. At that time, the Landfill was accepting approximately 420 tons of waste per day. The 1991 permit allows the facility to accept as much as 1,200 tons per day. The total approved Landfill area was 121 acres, with approximately 88 acres designated for permanent disposal.

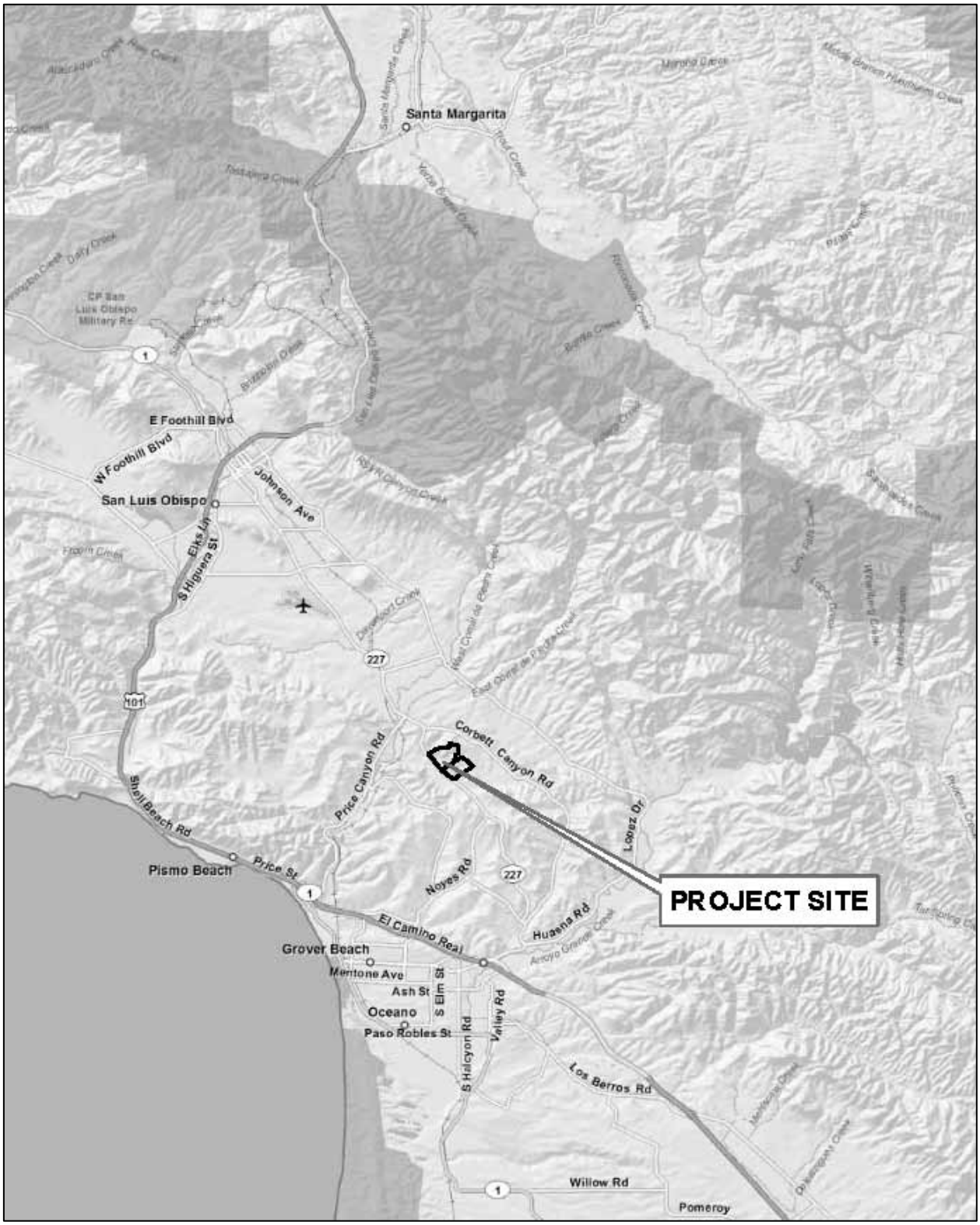
The Landfill service area generally includes the north coast and southern San Luis Obispo County communities including San Simeon, Cambria, Cayucos, the City of Morro Bay, Los Osos, the City of San Luis Obispo, the City of Pismo Beach, the City of Arroyo Grande, the City of Grover Beach, Oceano, and Nipomo, similar to the Coastal Region identified in the Siting Study (refer to Figure III-4). Some waste from northern Santa Barbara County is also accepted at the Landfill.

1. Existing Operations

The existing operations at the Landfill can be classified into one of five categories:

- Disposal Area (or, Permanent Disposal Area);
- Resource Recovery Park;
- Compost Operation;
- Materials Recovery Facility; and,
- Support Activities.

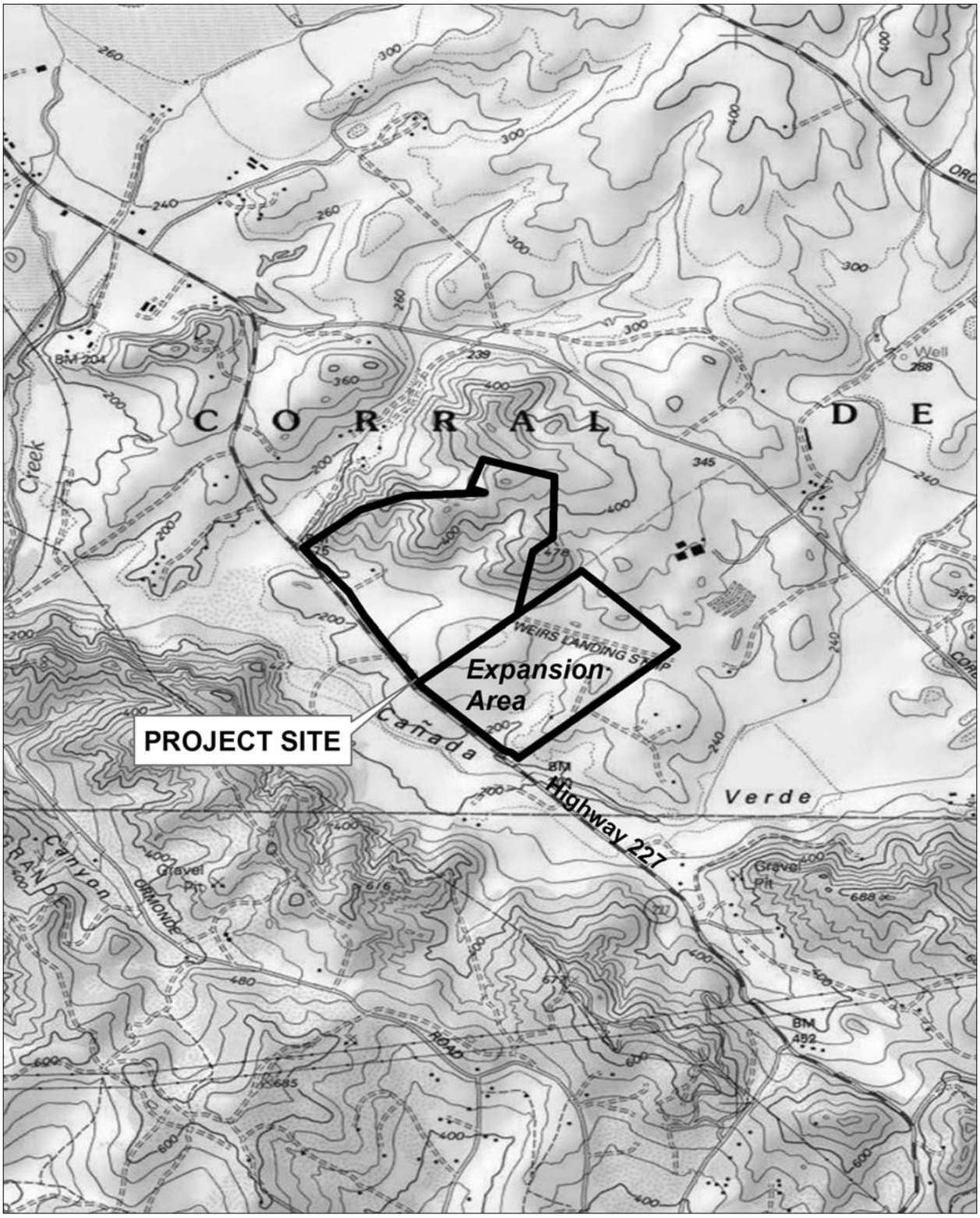
Over the last five years, the facility has received approximately 250,000 tons per year of material for disposal or recovery. Approximately 30 percent has been diverted from permanent disposal and recycled or put to another beneficial use. The facility accepts nonhazardous residential, commercial, and industrial wastes. Hazardous wastes are not accepted at the facility with the exception of household hazardous wastes such as paint, cleaning products, and pesticides. These, along with universal waste and electronic wastes such as television sets and computers, are accepted at the household hazardous waste facility and universal and electronic waste recycling center located within the Resource Recovery Park.



Source: ESRIDATA

NORTH
Not to Scale

Vicinity Map
FIGURE III-1



Source: USGS quadrangle – Arroyo Grande NE

NORTH
1:24,000

Location Map
FIGURE III-2

Insert Figure III-3 – Aerial Photo of Project Site 8.5x11 color

Back of Figure III-3

Insert Figure III-4 – Approximate Service Area 8.5x11 color

Back of III-4

a. Disposal Area

The permitted disposal area footprint is approximately 88 acres (refer to Figure III-5). The disposal area is constructed in a series of "modules" (currently Module 8 is being filled). Module construction includes excavating native soils/bedrock, installing a composite liner to contain waste within the disposal area, filling the modules with waste, and collecting and removing any leachate and/or methane gas produced by the waste (refer to Figure III-6).

1) Module Excavation

Excavation of a new module begins while an existing one is being filled. Excavated material from a new module is used as daily or intermediate cover for the active module. Excess excavated material has been stockpiled on site at one of three locations throughout the site (refer to Figure III-5). Stockpiled soil is seeded to prevent erosion. The soil is used in the construction of subsequent modules or used as part of the final, permanent cover. Heavy equipment used for module excavation includes scrapers, graders, water trucks, and service trucks. The amount of time each of these pieces of equipment is in use varies, although water trucks are in nearly constant service during the dry season. During periods where excavation of new modules is accelerated due to demand for additional disposal space, multiple scrapers and graders are in intensive daily use for as long as 6 months per module. Specific assumptions regarding daily use of heavy equipment at the Landfill is included in Appendix F.

2) Module Lining

The side slopes and base of each module are lined with a composite liner. The first component of the liner is a geosynthetic clay layer consisting of two synthetic fabrics stitched together and filled with very low permeability clay, such as bentonite. Over this layer, a 60-mil (approximately 0.06 inch), high-density polyethylene (HDPE) secondary plastic (geomembrane) liner is installed (refer to Figure III-6). The plastic liner, which is chemical resistant to corrosion and damage, is then welded together and tested to ensure a continuous seal. State and Federal standards are used in testing the liner system for competence. Heavy equipment use during module lining is limited to avoid damaging the liner system.

3) Leachate Collection and Removal

A leachate collection and removal system (LCRS) is installed in each module above the liner system. The collection system includes a series of perforated pipes laid in gravel-filled trenches. A blanket of geotextile fabric is laid above the gravel drainage layer to prevent fine soil particles from clogging the leachate collection layer (refer to Figure III-6). These pipes capture liquids that migrate down through the waste. Captured liquids are conveyed to a sump where they are pumped into an above ground storage tank. The storage tank is located in a facility in the southwest corner of the site (refer to Figure III-5). The LCRS collection system is difficult to repair due to much of it being located below cover and waste, and therefore proper installation is critical.

On average, the Landfill generates approximately 700,000 gallons of leachate annually (2.1 afy). The leachate is chemically tested annually, and testing reports are reviewed by the Regional Water Quality Control Board (RWQCB). To date, the leachate has been determined to be non-hazardous and may be used for dust control at the Landfill. In the event that leachate being

produced is determined to be hazardous, it can be pumped from the facility directly into water trucks and transported to a site that can accept hazardous wastes. The leachate facility was designed to accommodate a treatment plant that would treat the leachate if necessary, but, because at this point the leachate has been non-hazardous, it has not been necessary to construct the treatment plant.

Heavy equipment used in preparation of the LCRS would include gravel delivery trucks and flatbed trucks used to deliver piping and other supplies. Substantial use of heavy equipment is limited however to avoid damaging the liner systems.

4) Daily Filling and Cover Procedures

Waste materials are placed in the modules, in lifts approximately fifteen feet thick. The slopes of each lift are approximately 3:1 (three feet horizontal to one foot vertical.) Each lift is comprised of a series of two-foot thick layers of waste up to 200 feet wide that have been compacted by construction equipment. At the end of each day, the working face of the lift is covered with either six inches of compacted soil or an Alternative Daily Cover (ADC). The Landfill currently uses plastic tarps and processed greenwaste as ADC. Other materials (such as shredded tires) can be used as ADC, but would require additional regulatory approval prior to use at the Landfill. The daily cover controls litter and odors and discourages vectors until additional waste is placed and compacted the following day.

Once the lift reaches fifteen feet, an intermediate soil cover approximately one foot thick is placed over the lift, and another lift is started. The total number of cells in any one module depends on the size and orientation of the modules. The intermediate cover is placed and compacted to minimize rain infiltration and promote drainage. These intermediate covers are also intended to help minimize odors created by decomposing waste, prevent the emergence of flies, and minimize the progress of fires that may ignite in the waste.

Heavy equipment used for these procedures includes bulldozers, compactors, water trucks and service trucks. This equipment is in service throughout the day on all days of operation. Water truck use is limited during wet weather periods.

5) Gas Collection and Removal

Landfill gas (LFG) is generated by the anaerobic (without oxygen) decomposition of organic material in waste. LFG is made up primarily of methane and carbon dioxide with some nitrogen, oxygen, and other trace compounds. Because LFG is typically 45 to 50 percent methane, it can be used as a fuel supplement to natural gas. Currently, LFG is captured throughout the disposal area via a series of 36 wells and ten horizontal collectors (refer to Figure III-7). Wells are added or taken off-line depending on gas production in the area. LFG is transmitted through a gas transmission line to the Price Canyon Oilfield operations located approximately one mile west of the landfill on Price Canyon Road. The gas is used as a fuel to supplement natural gas in the production of steam. The steam is injected into the oil production field to enhance oil production. A flare station is located at the Landfill to combust LFG in the event the oilfield is unable or unwilling to accept LFG.

6) Drainage Control

The surface drainage control system includes a series of benches, culverts, natural drainage channels, and sedimentation basins. Finished landfill slopes are graded at 3:1 or flatter. Each finished slope includes benches placed every 50 feet of elevation. These benches slow water flow and include earthen or concrete conveyance systems. The flat surface at the top of the slope, referred to as the "top deck," is graded to have slopes of approximately three percent, so that water neither ponds on the surface nor runs-off too rapidly, increasing the chance for erosion.

Surface water runoff is directed to one of three detention basins, where sediment and other debris can settle out. The basins have been designed to accommodate flows resulting from 100-year, 24-hour storm events. The basins, once full, eventually outfall to tributaries of Pismo Creek. There are four places where surface water is discharged offsite. Two of the detention basins serve as discharge locations, another is located near the leachate storage facility, and the fourth is the "highway drain", located where the natural drainage channel in the expansion area crosses under Highway 227 (refer to Figure III-7).

b. Compost Operation (CO)

The Compost Operation (CO) processes wood waste for re-use as fuel and greenwaste for compost. Greenwaste is processed in a tub grinder to reduce the size of the vegetation. Once ground, the greenwaste is placed in windrows and turned periodically. Once the material has been composted it is passed through a 3/4-inch screen. Anything that passes is sold as compost to wholesale distributors. Remnants larger than 3/4-inch are used as Alternative Daily Cover (ADC) within the disposal area modules. Green waste is sometimes also utilized as erosion control on slopes in and around the Landfill. Wood waste (e.g., pallets, trees, construction wood waste, etc.) is processed in the tub grinder and exported offsite for use as a cogeneration fuel. The finished compost is tested once every 5,000 cubic yards for the presence of pathogens and heavy metals.

Heavy equipment used by the CO includes front end loaders, roll-off trucks, a tub grinder, trommel screen, water trucks, and the compost turner. Loaders are used regularly, the tub grinder and compost turner are used weekly rather than daily and this would not change as a result of the proposed project. Equipment use is limited to water trucks and the trommel screen on occasional weekend days.

c. Resource Recovery Park (RRP)

The Resource Recovery Park (RRP) includes a public drop-off facility, a construction and demolition (C&D) recycling operation, a household hazardous waste drop-off facility, a universal and electronic waste recycling center, and an equipment maintenance facility. Members of the general public that enter the RRP are required to separate materials into various bunkers. Commercial loads with recoverable construction waste are sent to the C&D site within the RRP for preliminary sorting into bunkers by Landfill staff. Materials collected, sorted, and recovered in the bunkers include cardboard, metal and appliances, greenwaste, wood waste, concrete/asphalt/brick, trash, tires, drywall, and other paper and plastic materials.

Cardboard, paper, and plastic is transported to the Materials Recovery Facility for processing and bailing. All hazardous substances are removed from appliances before they are taken to a bulk metal storage location and eventually processed for scrap. Greenwaste and wood waste is transported to the Compost Operation for processing. Used concrete is crushed, as necessary, and used on-site for road base and for winter tipping pads. Drywall is exported off-site to a gypsum recycling center where it is used in compost. Tires are exported off-site as well, where they are shredded and put to beneficial use. Trash is taken to the disposal area.

The Household Hazardous Waste Facility in the RRP allows the public to safely drop-off hazardous wastes including batteries, paints, oils, pesticides, cleaning chemicals, etc. Materials are processed and packaged for re-use, recycling, or exported for disposal at an approved facility.

The RRP also recycles universal waste and electronic waste. This facility is open from 8:00 a.m. to 3:00 p.m. Hazardous wastes are removed from the materials and recyclable materials are recovered. Cathode ray tubes, thermostats, and fluorescent lighting tubes can also be recycled at this facility. Hazardous materials, such as lead, are recovered and packaged for exportation to an approved hazardous waste facility.

Heavy equipment used would include rubber tired loaders, conveyor belts, a large magnet, sort line conveyor, and a hopper. Equipment would be used regularly throughout the year, although generally less on weekends.

d. Materials Recovery Facility (MRF)

The Materials Recovery Facility (MRF) accepts recyclable waste from the curbside pickup services and industrial and commercial costumers. In addition, it receives recyclable material sorted at the RRP. The MRF processes up to eighteen tons per hour of glass, plastic, paper, cardboard, aluminum, tin, and other metals. Processing occurs from 7:30 a.m. to 4:30 p.m., seven days a week. Materials are sorted both mechanically and by hand, baled, and sold for re-use. The sorting process produces less than 5 percent residuals (materials which cannot be recycled), which are hauled to the disposal area. Used oil is processed at this location as well. Oil and oil filters are collected in tanks and drums adjacent to the MRF. These products are stored and periodically transported offsite by a waste oil handler for recycling. Heavy equipment used in the MRF would include rubber tired loaders, rolloff trucks, forklifts, and a mini excavator.

e. Support Activities

1) Monitoring Systems

Various systems are in place at the Landfill to monitor the air and water quality impacts that could result from operations (refer to Figure III-7). A description of these systems is provided below.

(a) Leachate Monitoring

Leachate production is monitored quarterly and leachate composition is monitored annually as part of the Landfill water quality monitoring program. Results have indicated the leachate is

nonhazardous and can be used for dust control onsite. Leachate production and composition is reviewed by the RWCQB.

(b) Groundwater Monitoring

There are currently fifteen groundwater monitoring wells in place at the Landfill. These are periodically monitored for various constituents. Results of the monitoring are provided to the RWQCB quarterly. The existing groundwater monitoring plan has been reviewed and approved by the RWQCB (WDR Order No. R3-2002-0065).

(c) Surface Water Monitoring

The Stormwater Pollution Prevention Plan (SWPPP) for the Landfill requires periodic sampling of surface flows to identify contaminated surface water. Results are reported to the RWQCB.

(d) Landfill Gas Quality, Migration and Well Monitoring

The gas collection wells described in Section III.C.1.a.(5) above are monitored monthly to ensure they are operating properly. The gas is monitored daily to assess constituents and to ensure the collection system is operating properly. Gas probes (as shown in Figure III-7) are located around the perimeter of the Landfill to ensure gas concentrations do not exceed regulatory thresholds.

(e) Landfill Surface Emission and In-Structure Monitoring

Surface emissions from the Landfill are monitored quarterly to ensure methane emissions do not exceed regulatory limits. Buildings and structures are monitored quarterly to ensure methane is not concentrated in dangerous levels in structures onsite.

2) Nuisance Controls

(a) Odors

Odors are generated by the aerobic and anaerobic decomposition of waste at the Landfill. The decomposition of buried wastes results in the creation of methane gas and carbon dioxide, which are mostly odorless, but can also result in the creation of volatile organic compounds, which contain odors. These gasses are collected in the Gas Collection and Control System (GCCS) and used as fuel. Odors generated by waste that is decomposing on active disposal area cells are controlled through the use of cover materials. Based on the relatively small amount used throughout the year, and the fact that it is not easily airborne, leachate is not considered a significant odor source.

Starting in 1996, the facility began the above described composting operation. An Odor Minimization Plan was prepared in 2003 and updated in 2007. The Odor Minimization Plan describes procedures that are used to minimize odors, such as the maintenance of the aisles between windrows, the size of the windrows, and when the material should be "turned."

(b) Vectors

A vector is an organism that transmits disease or infections. Vectors commonly associated with landfills include insects, rats and mice, and birds, particularly crows and seagulls. Vectors can potentially spread diseases by carrying decaying waste containing bacteria, viruses, and other organisms offsite, or by becoming infected themselves and coming into contact with humans, animals, or plants in surrounding areas. Seagulls are the prevalent vector present at the Landfill.

Seagulls are discouraged from frequenting the Landfill by use of pyrotechnics (whistles and blasts) and falcons. Falcon handlers have been brought to the site and regularly fly the birds in an effort to minimize gull activity. The falcon program has proven successful by reducing the number of both local and migratory birds foraging at the Landfill. The applicant has suggested that a formal falcon program will have to remain active in perpetuity to control the gull populations at the Landfill. Whistles are set-off periodically throughout the day to deter seagulls as well. Other pests such as rodents and flies are controlled through the use of the daily and intermediate cover and waste compaction procedures described previously. Adding cover to the working faces of the disposal area and compacting the waste eliminates the food source for rodents and makes it difficult for flies to emerge from eggs in the waste.

The CO may include unknowingly process vegetation affected by plant-associated disease such as Pine pitch canker and Sudden Oak Death. These diseases would be destroyed by the composting process, although there would be periods during delivery and initial processing of the greenwaste, during which the diseases could be spread. Finished compost would not carry these diseases.

(c) Dust

Water sprayed from trucks is used to control dust emanating from unpaved and temporarily exposed soil areas within the Landfill. Water is also used during operation of grinding and crushing equipment to control dust. In some cases, roads may be "based" with recycled concrete to control dust. Water used for daily dust control operations is pumped from water storage ponds (source of water is from onsite wells) or from the leachate collection tank.

(d) Litter

Litter control includes installing four to eight-foot high construction fences to trap blowing trash, collection by hand using temporary employees during very windy times, covering exposed trash areas daily, and enforcing new regulations that require loads entering the Landfill to be tarped. State Highway 227, one mile north and south of the Landfill, has been "adopted" by the applicant through the Caltrans Adopt-a-Highway Program and trash along the road is picked-up on a regular basis.

(e) Other Activities

There are various other facilities onsite that aid in Landfill operations. These include the entrance/scalehouse, administrative office, maintenance shop and yard, and a fueling station (refer to Figure III-5). Every load that enters the facility is weighed, the type of waste is identified, and the location from which it originated is noted. The administration office provides space for customer support, and facility management operations. The maintenance shop is used

to store and maintain vehicles used onsite. Fuel tanks are located onsite and used specifically for Landfill vehicles and garbage trucks.

f. Traffic Generation

All traffic enters and exits the Landfill at the entrance on Highway 227 (refer to Figure III-5). Traffic consists of employees, vehicles delivering waste, and vehicles transporting recycled commodities offsite. Employee vehicles are generally single occupancy automobiles, although recently a vanpool system has been set-up for employees commuting from the Santa Maria area. Vehicles delivering waste are a mix of smaller vehicles and large haul trucks. Vehicles transporting commodities are generally larger haul trucks.

The Landfill is permitted to receive as many as 542 vehicles per day. On average, the Landfill receives approximately 300 vehicles per day. In 2006, 439 vehicles entered the Landfill on its busiest day. Daily traffic generation can vary considerably by season of the year and time of day.

g. Water Supply

Water for the operations comes from a variety of sources. There are five water wells onsite. Two are located near the existing maintenance building. The applicant has estimated that those wells produce a combined ten gallons per minute. The other three wells are located on the southern side of the expansion area (refer to Figure III-5). During peak use summer months, the facility requires as much as 60,000 gallons of water per day for operations and dust control. When module construction is occurring, water demand can be even greater, and has historically exceeded onsite supply. The increased water demand is generated by construction activities including dust control and soil compaction. Back-up water has been provided by Corbett Canyon Winery, a neighboring property. Leachate is periodically used for dust control as well.

2. Existing Permit Conditions of Approval

In 1991, the Landfill received a land use permit from the County of San Luis Obispo that allowed the expansion and modification of some of the operations. That permit effectively expanded the disposal area footprint by approximately 22 acres; the allowed maximum height of the Landfill was raised 30 feet, to approximately 500 feet above sea level. At the time, it was expected that this expansion would extend the life of the Landfill by a minimum of nine years. Improvements to the recovery and recycling processes have since increased that life expectancy.

Before the permit was approved, an EIR was prepared so that potential impacts from the proposal could be evaluated. This EIR was certified by the County of San Luis Obispo. A number of mitigation measures were developed during the EIR process that would reduce the majority of potential impacts to a less than significant level (visual impacts associated with topographic changes and the appearance of the Landfill were considered significant and unavoidable despite proposed landscaping.). These measures became conditions of approval for the project, required to be implemented during Landfill operation, and remain in effect at the present time.

a. Existing Permits

The facility currently operates under the permits shown in Table III-1 below.

TABLE III-1
Existing Permits

Permit	Responsible Agency*	Date of Issuance
Solid Waste Facility Permit (40-AA-0004)	CIWMB	1/23/2002
Waste Discharge Requirements (R3-2002-0065)	RWQCB	11/1/2002
Permit to Operate (#37)	SLOAPCD	1/1999
Development Plan (D860156D) Landfill Expansion	County Planning and Building	12/1991
Development Plan (D000281D) Compost Operation	County Planning and Building	7/2001
Development Plan (D960246) MRF Construction	County Planning and Building	1997

* *CIWMB – California Integrated Waste Management Board*
RWQCB – Regional Water Quality Control Board
SLOAPCD – San Luis Obispo Air Pollution Control District

The Conditional Use Permit for the proposed project would replace all of the existing separate permits for the landfill, CO and the MRF, so that the landfill would operate under one permit.

D. PROPOSED PROJECT

The proposed project includes the following nine primary components. These components are described in detail in the sections below:

1. Expanding the disposal area footprint by approximately 46 acres;
2. Increasing the total facility allowable tonnage limit by 880 tons per day;
3. Expanding and relocating the Resource Recovery Park to the eastern corner of the site;
4. Expanding and modifying Compost Operations by allowing more and different materials to be composted;
5. Expanding and enhancing the Materials Recovery Facility;
6. Constructing a new scalehouse and entrance approximately one-half mile south of the existing entrance on Highway 227;
7. Increasing the operating hours for the Resource Recovery Park, Compost Operations, and Materials Recovery Facility and making them more consistent with the Landfill operating hours. Additionally, adding a second shift at the Materials Recovery Facility;
8. Increasing the staffing levels from 79 to 120; and,
9. Other miscellaneous improvements (e.g. relocating fuel tanks, landscaping, replacing equipment maintenance building).

Insert Figure III-5 – Permitted Landfill and Existing Facilities

Back of Figure III-5

Insert Figure III-6 – Module Construction Detail

Back of Figure III-6

Insert Figure III-7 – Existing Monitoring System

Back of Figure III-7

1. Expansion of Landfill Capacity

The area currently permitted for use by the Landfill is 121 acres, including the 88 acre disposal area. The proposed project would increase the Landfill footprint by an additional 88 acres, including a 46 acre expansion to the disposal area. This expansion is shown in Table III-2.

TABLE III-2
Existing and Proposed Facility Footprints

	Existing Conditions (acres)	Proposed Project (acres)	Increase (acres)
Landfill Footprint*	121	209	88
Components			
Disposal Area	88	134	46
Resource Recovery Park	2	4	2
Compost Operations	12	23	11
Materials Recovery Facility	1.26	1.9	0.64

**The Landfill footprint is greater than the sum of its components. In this case it includes all portions of the site, some of which will be used for supporting facilities such as the scales and road and some of which will not be used for solid waste activities/facilities such as wetland areas. The size of the components is based on the approximate area of disturbance associated with each.*

The disposal area capacity is expected to increase by approximately 13.1 million cubic yards. This increase would extend the expected disposal life of the Landfill by approximately 25 years based on the annual growth in disposal services over the last five years. The applicant has estimated that there is currently approximately eight years of capacity remaining; therefore, the proposed project would potentially accommodate waste disposal needs until approximately the year 2040.

The expanded disposal area would provide additional horizontal disposal capacity (i.e., new areas of the project site that have not been disturbed in the past), and in addition would provide an opportunity to increase vertical capacity (i.e., the height of the disposal area) at some portions of the disposal area (refer to Figures III-8). However, the expansion would not affect the currently permitted maximum of height of the Landfill (i.e., 500 feet above sea level). Construction of individual modules within the disposal area would continue as described in Section III.C.1.

The fill sequence is shown on Figure III-9. The expanded disposal area would be developed in seven modules. As currently planned, Module 10, which would be located where the existing Landfill entrance is now, would be constructed first. The expansion area would be filled next, with development occurring from west to east, and south to north. Fill sequencing may change as the Landfill is developed.

2. Increase in Permitted Tonnage Limits

The proposed project would increase the Landfill permitted daily tonnage limits from 1,620 tons per day (tpd) to 2,500 tpd. This increase of 880 tpd would accommodate anticipated increases in compostable and recyclable materials and maintain existing disposal limits (refer to Table III-3).

TABLE III-3
Existing and Proposed Daily Tonnage Limits

Component	Permitted TPD	Proposed TPD
Disposal	1,200	1,200
RRP	Currently included in disposal TPD	450
Compost Operation	300	450
MRF	120	400
Total	1,620	2,500

This increase is not expected to result from any changes to the Landfill service area. It is expected that the service area will remain the same, although increased development within the service area will ultimately require increased disposal and recovery capabilities.

3. Expansion and Modification of Compost Operation (CO)

The proposed project would increase the permitted daily tonnage limit for the Compost Operation (CO) from 300 to 450 tpd. To accommodate this change, the area required for composting would increase from 12 to a maximum of 23 acres. Compost windrows would be approximately 18 feet wide and seven feet high. In addition, the applicant is requesting to modify the daily operation by:

a. Adding food waste and natural fiber material to the compost mix;
b. Adding bag or other in-vessel composting;
c. Adding water and wastewater treatment plant sludge and biosolids to the compost mix;
d. Moving compost operations to the top deck of the inactive portion of the landfill (refer to Figure III-8); and,
e. Adding bagging and retail sales to the public.

The CO would be relocated to the proposed "top-deck" in phases, and there would be periods where the operation would occur at both the existing location and the new location simultaneously. The CO may incorporate new composting technologies such as Aerated Static Pile (ASP) composting. In ASP composting, blowers are used to provide air to the composting material. Air is delivered through a series of pipes or plastic bags. This method is implemented to speed-up the composting process and aid in the composting of the additional materials proposed to be included in the operation, such as food waste and wastewater treatment plant sludge.

ASP composting may also include the use of covers as a way to better manage moisture and odors. There are increased capital costs and potentially increased daily labor costs associated with setting up the ASP system, as it requires installation of plastic piping, blowers, and potentially biofiltration systems for odor control.

The proposed project would result in as much as 100 tons of sludge and/or biosolids being accepted and composted by the Landfill per month. Currently the Landfill does not accept biosolids and it is being proposed because the applicant anticipates an increased demand for permitted disposal locations. For purposes of this EIR, the term biosolids, as defined by the California Integrated Waste Management Board (CIWMB), means sewage sludge that has been treated with anaerobic digestion and heat. The Landfill would accept both Class A and B biosolids. Loads of biosolids to be composted would receive special handling. For example, loads would be delivered into a receiving basin with green wastes for rapid incorporation into windrows. Composted material for sale would be separated according to whether or not biosolids were an original component.

Currently the compost is sold to wholesale customers who purchase a minimum of eight cubic yards. The proposed project would include adding retail sales (loads as small as two cubic yards) to the CO. All customers would enter the Landfill, get weighed at the scalehouse, pay for the material, and then proceed to the compost area for loading.

4. Expansion and Relocation of Resource Recovery Park (RRP)

The size of the Resource Recovery Park (RRP) would be increased from two to four acres and relocated to the eastern corner of the project site (refer to Figure III-9). The RRP would be partially cut into the existing slope on the eastern property line. The RRP would be accessed from the new entrance road. Large concrete bunkers and/or roll-off bins would be incorporated to assist in handling the various waste materials. An elevated construction and demolition sort line would be added to the RRP. The line would process up to 350 tpd (30 tons per hour) of mixed construction and demolition material. A 30-foot by 80-foot metal building will be installed in the RRP to store and process universal and electronic waste.

5. Expansion and Enhancement of Materials Recovery Facility (MRF)

The proposed project would increase the permitted daily tonnage limits of the Materials Recovery Facility (MRF) from 120 to 400 tpd. The MRF building would be increased in size from 55,000 square feet to 68,800 square feet to allow for additional tipping pad and storage of materials (refer to Figure III-8). The height of the proposed MRF would be approximately 40 feet, similar to the existing MRF. A new, recycled commodities storage area would be added to the south side of the existing building. It would include an additional 14,500 square feet, be enclosed on three sides, and covered. The MRF processing equipment would be upgraded to accommodate 30 tons per hour. In addition, a second employee shift would be added to the operation, allowing material to be processed between the hours of 7:00 a.m. and 10:00 p.m. A 1,500 square foot office space would be added to the MRF over the existing office space and educational center.

6. Construction of New Entrance/Scalehouse

The proposed project would include construction of a new Landfill entrance located approximately 2,800 feet south of the existing entrance on Highway 227. All Landfill traffic would enter and exit the facility at this location. An entrance gate that could be locked after hours of operation would be installed approximately 50 to 100 feet east of the entrance road from Highway 227. The entrance gate would be lit, identify the facility, and include emergency contact information. The entrance gate would have a "Knox box" (or similar devise) to allow for emergency access during non-business hours. A left turn lane would be added to State Highway 227 for southbound vehicles entering the site (refer to Figure III-9). An acceleration lane would also be added for vehicles exiting the site headed northbound on Highway 227. Once the new entrance is completed, the existing entrance would be permanently closed.

Three new scales (two inbound, one outbound) and a scalehouse would be constructed approximately 1,200 feet from Highway 227, along the new entrance road. Space for an additional future inbound scale would be provided. This would increase the queuing distance for incoming traffic by approximately 900 feet. The scalehouse would include a restroom. A new wastewater system (i.e., septic tank/leach field) would be constructed for this facility.

7. Modification of Hours of Operation

The hours of operation at the Landfill are currently governed by the CIWMB Solid Waste Facility Permit. The Landfill operation accepts waste from the public between the hours of 8:00 a.m. and 3:00 p.m. Waste may be accepted from franchise haulers (i.e., curbside and other commercial waste collectors and haulers) and be processed from 7:00 a.m. and 4:30 p.m.

The proposed project would expand these operating hours to allow additional time in the morning and evening for the public and franchise haulers to deliver waste. Facility component hours would be modified such that they would all be consistent with one another. MRF processing hours would be extended to provide for a second shift, allowing time to process the increase in recyclable materials the facility would receive as a result of the proposed project. The existing permitted hours of operation and the proposed new hours of operation are provided in Table III-4. The hours shown apply seven days a week except in the case of the CO and MRF, which do not and would not involve significant weekend processing.

TABLE III-4
Existing and Proposed Hours of Operation

Component	Existing	Proposed	Increase
Landfill/Disposal Area			
Commercial Haulers	7:00 a.m. to 4:30 p.m.	7:00 a.m. to 5:00 p.m.	0.5 hours
General Public	8:00 a.m. to 3:00 p.m.	7:00 a.m. to 5:00 p.m.	3.0 hours
Material Recovery Facility			
Waste Receipt	7:30 a.m. to 4:30 p.m.	7:00 a.m. to 5:00 p.m.	1.0 hour
Processing	7:30 a.m. to 4:30 p.m.	7:00 a.m. to 10:00 p.m.	6.0 hours

Component	Existing	Proposed	Increase
Compost Operation			
Receipt	8:00 a.m. to 3:00 p.m.	7:00 a.m. to 5:00 p.m.	3.0 hours
Processing	7:30 a.m. to 4:30 p.m.	7:00 a.m. to 5:00 p.m.	1.0 hour
Resource Recovery Park			
Resource Recovery Park	7:30 a.m. to 4:30 p.m.	7:00 a.m. to 5:00 p.m.	1.0 hour
Hazardous Waste			
Household, Universal and Electronic Hazardous Waste	11:00 a.m. to 3:00 p.m.	7:00 a.m. to 5:00 p.m.	6.0 hours

8. Increase Staffing

As a result of the proposed project, the number of employees working at the Landfill would increase from 79 to 120. In general, if more material is accepted at the Landfill, the greater the number of employees the facility needs for processing. Staffing increases would also be necessary to accommodate increased regulatory activity, reporting, and monitoring. Staffing levels would temporarily increase during construction periods. Anticipated staffing levels resulting from the proposed project are shown in Table III-5.

TABLE III-5
Existing and Anticipated Staffing Levels

Component	Existing Staff	Proposed Staff
Administration	5	6
Disposal Area Operations	7	9
Scalehouse	4	6
Materials Recovery Facility	40	61
Compost Operations	4	6
Resource Recovery Park	7	12
Household Hazardous Waste	8	12
Universal and Electronic Waste	4	8
Total	79	120

9. Miscellaneous Improvements

A new maintenance building, including a shop and employee break area, would be constructed within the proposed RRP. The building would include offices, record storage, restrooms, a kitchenette, and lockers. The RRP would use onsite septic systems to dispose of wastewater.

A portion of the waste collection truck fleet is being converted to operate on compressed natural gas. To support the need for this fuel, the applicant is proposing to construct a compressed natural gas fueling station adjacent to the existing fuel station near the maintenance building (refer to Figure III-5). The facility would be relocated near the new maintenance building in the proposed RRP once these areas are constructed and prior to initiation of Module 10. Employee parking would remain at the MRF and additional parking would be located in the RRP.

The applicant has proposed a conceptual landscaping plan focusing on the southwestern, southern, and southeastern boundaries of the property (refer to Figure III-11). Landscaping would consist of native plants, such as oak trees, or those suitable for the California Central Coast climate.

The applicant is also proposing to restore an approximately 1,200-foot long section of an onsite ephemeral drainage from an existing detention basin to approximately the western property boundary. These improvements would be coordinated with biological mitigation measures anticipated to be necessary as a result of the proposed project.

10. Landfill Closure and Long-term Maintenance

The California Code of Regulations requires that landfills prepare a preliminary closure and post closure maintenance plan. The plan describes the methods that will be used to close the landfill in a manner that protects the long-term health of the public and the environment. The long-term maintenance plan specifies programs to maintain the integrity of the final cover, drainage system, leachate control system, landfill gas system, groundwater monitoring system, and the final grading.

Final cover designs must be approved by the RWQCB and the CIWMB. The applicant is proposing a standard closure design for waste disposal modules in landfills which includes the following:

- Two-foot thick foundation soil layer;
- One-foot thick low permeability soil layer;
- 40-mil thick geomembrane liner (lined modules only); and,
- Two-foot thick vegetative soil cover/drainage layer to support vegetation.

An alternative cover design can be implemented at the time of closure, with approvals from the permitting agencies. An alternative cover may be necessary if regulations change or onsite experiences have made it clear that a different design may be as effective as or more effective than the standard closure design.

Upon closure, the site would be considered open space, although the top deck may continue to be used for the CO. Once the Landfill reaches final grade and is closed, all slopes would be seeded with approved vegetation materials. CO materials too large to be composted and used as daily cover, would be used as mulch onsite or undergo further processing.

11. Earthwork

The applicant has estimated that the proposed project would result in earthwork that would include approximately 3,572,200 cubic yards of fill, and an additional 3,878,600 cubic yards of cut. 50,000 cubic yards of the fill would consist of imported gravel used for construction of the drainage layers. The remainder of the fill would come from onsite. The approximate cut and fill amounts are shown in Table III-6.

TABLE III-6
Estimated Earthwork Required (Cubic Yards)

Project Activities	Cut	Fill
Daily and Intermediate Cover		2,742,700
Final Cover		604,600
Liner		89,800
Earthfill		85,100
Excavate Stockpiles	644,300	
Excavate Modules	3,234,300	
Drainage Layer		49,900
Project Total	*3,878,600*	*3,572,100*
Additional Activities		
Module 8 Daily and Intermediate Cover		428,000
Total Earthwork Remaining	3,878,600	4,000,100

E. REQUIRED PERMITS

Table III-7 shows the permits and agencies relevant to the proposed project:

TABLE III-7
Responsible Agencies and Associated Permits

Permit	Responsible Agency
Conditional Use/Building Permits	County of San Luis Obispo Department of Planning and Building
Section 401, WDRs, SWPPP	RWQCB
Section 404	ACOE
Section 1603 Streambed Alteration Agreement	CDFG
Encroachment Permit	Caltrans
Solid Waste Facility Permit (SWFP)	CIWMB
Permit to Construct/Authority to Operate	APCD

This EIR is being prepared in response to the application for a Conditional Use Permit. That permit is considered the first step, and the County of San Luis Obispo is the lead agency in the expansion process. The CIWMB is considered a responsible agency and would rely on this EIR to determine whether or not it is appropriate to issue a revised SWFP.

Other responsible and trustee agencies would rely partially on the information in this EIR, although their permitting process may also require additional detailed information that may only be available at the time a certain activity commences in the future. For example, this EIR has provided a reasonable analysis of the impacts and the heavy equipment to be used by the Landfill, but because some activities might not commence for five years or more, the APCD would need to issue updated Operational Permits as the Landfill operations changed operating equipment in the future.

F. PROJECT TIMING AND PHASING

The proposed project components would be constructed at various times, depending on the needs of the facility. As currently envisioned, the proposed new entrance/scalehouse area and RRP would be constructed first. Once the RRP and new entrance are completed and the remaining disposal capacity exhausted, Module 10 (located at the existing entrance area) would be excavated and subsequently filled. Construction of the MRF and relocation of the CO are expected to commence as needed, which may be in approximately ten years, according to estimates provided by the applicant.

Insert III-8 – Proposed Final Contours and Facilities

Back of Figure 8

Insert Figure III-9 – Proposed Module Detail

Back of Figure III-9

Insert Figure III-9a – Module Construction Detail

Back of Figure III-9a

Insert Figure III-9b – Module Construction Detail

Back of Figure III-9b

Insert Figure III-10 – Proposed Monitoring System

Back of Figure III-10

Insert III-11 – Landscape Plan

Back of III-11