

## H. HAZARDS AND HAZARDOUS MATERIALS

The Hazards and Hazardous Materials section describes existing and potential sources of environmental hazards and hazardous materials associated with the proposed project. Hazards considered include those associated with construction activities, the collection and storage of household hazardous waste, airport compatibility, the spread of pathogens and disease, human health risks, odors, and fugitive trash. State regulations intended to reduce hazards associated with landfills are described and, when necessary, additional mitigation measures have been developed to reduce potential impacts to a less than significant level.

Since the release of the Draft EIR in January 2009, significant new information in regards to hazards and hazardous materials has become available. This information includes changes in the Project Description proposed by the applicant (refer to Section III), information submitted by the public to the County, completion of a preliminary Health Risk Assessment (HRA), and correspondence from the San Luis Obispo County Public Health Department (SLOCOPHD). This information is included in Appendix I.

In November 2010, due to numerous complaints by neighbors of the proposed project and letters of violation received by the landfill from regulatory agencies, the County Planning Commission held a public “revocation hearing” to review compliance with the conditions established in the 2001 Conditional Use Permit for the Compost Operation. The hearing was held on November 4, 2010. The Planning Commission was asked to review the existing permit conditions for the Compost Operation in the context of the public concerns and regulatory agency input, and to consider if one of the following options was necessary:

1. Allow the permittee additional time to correct violations or non-compliance;
2. Modify conditions of approval on the basis of evidence presented at the hearing;
3. Revoke the approved land use permit and order the discontinuance or removal of the approved use within a time specified by the Planning Commission; or,
4. Allow the permittee to continue the operation as currently permitted.

The Planning Commission concurred with County staff’s recommendation, found Option 2 above to be appropriate, and adopted five new conditions of approval which must be implemented by the Landfill prior to and during re-establishment of the Compost Operation. Information from the revocation hearing staff report has been incorporated into this section of the EIR. The Staff Report for the Hearing, with final approved conditions of approval is included in Appendix J. The five new conditions adopted by the Planning Commission have been incorporated into this EIR as mitigation measures. Condition #1 has been incorporated into the Noise section (refer to NS/mm-1). Conditions #2 through #5 have been incorporated into this section (refer to HAZ/mm-7, 8(e), 12, and 12 in this section).

### 1. Existing Conditions

The Landfill is a Class III landfill, which means that it accepts materials that are not required to be disposed of in a Class I or II landfill. This material is collectively referred to as “trash.” Typical items include furniture, construction debris, roofing material, wood, carpet, and vegetative debris. There are a variety of items that are prohibited from disposal in the Class III

Landfill, such as whole tires, automotive batteries, and appliances containing refrigerant or combustible gas, such as propane. Liquid and solid hazardous wastes, such as petroleum or chemically contaminated soils, nuclear waste, and medical wastes, are not accepted at the Landfill either. The Landfill currently ensures that prohibited materials are not disposed of in the permanent disposal area through:

1. Checking covered loads and questioning public customers that enter the Landfill;
2. Identifying prohibited materials during sorting of waste in the Resource Recovery Park (RRP);
3. Using on-site staff to identify prohibited items inadvertently dumped into the permanent disposal area by commercial haulers; and,
4. Providing specific locations on-site to drop-off household hazardous wastes so that they are not disposed of in the permanent disposal area.

In addition, there are monitoring wells to evaluate water quality, including the presence of constituents that could present health hazards. To date, based on the information in the Water Resources section, any previous improper disposal of prohibited materials that may have occurred has not affected groundwater quality.

a. Household, Electronic, and Universal Hazardous Wastes

Hazardous waste is not accepted at the Landfill, with the exception of household hazardous wastes, electronic hazardous waste (E-waste), and Universal waste (U-waste), which is accepted for processing but not permanent disposal. These wastes are collected separately from others, hazardous materials are removed, and recyclable materials recovered. Separate collection of hazardous household waste, E-waste, and U-waste decreases the frequency of these materials being disposed in the Landfill or unlawfully off-site. Different drop-off procedures and processing occur for each type of waste. Currently, San Luis Obispo County residents may drop off household hazardous wastes, including paints, oils, pesticides, household chemicals, etc., on Friday and Saturday, 11:00 a.m. to 3:00 p.m., at the Household Hazardous Waste Collection Facility. Here materials are processed and packaged for reuse, recycling, or proper off-site disposal.

E-waste and U-waste can be dropped-off at the Electronic Waste Processing Area and Recovery Facility during specified hours. Examples of E-waste include, but are not limited to, televisions and computer monitors that contain cathode ray tubes, liquid crystal display (LCD) desktop monitors, laptop computers with LCD displays, LCD televisions, and plasma televisions. U-waste includes batteries, compact fluorescent lamps (CFLs), and mercury thermostats. U-wastes are only temporarily stored on-site until being transported off-site. Typical transportation of U-waste includes shrink wrapping pallets to minimize breakage during collection and hauling to an authorized recycler, followed by storage of pallets within bins, boxes, or other containers.

b. Fugitive Trash

Litter on surrounding properties and along Highway 227 continues to be a common complaint of residents, as described in the 1991 EIR and discussed at the scoping meeting for this EIR, held in 2007. Litter can blow from the Landfill disposal area, escape from delivery trucks, or be illegally dumped outside of the Landfill during times when it is closed.

The Landfill has established a litter control program to reduce potential litter-related nuisances. The Landfill, along with the California Highway Patrol (CHP), enforces tarping regulations that require all loads to be covered with a tarp or other material to prevent trash from blowing out of delivery vehicles during transport. To prevent fugitive trash from leaving the disposal area, the Landfill compacts waste immediately after disposal, implements a tarping/cover program, and minimizes the size of the active working face. To prevent windblown litter, portable and stationary litter control fences are utilized near the disposal area working face, and manual pick-up occurs. The Landfill also participates in the California Department of Transportation (Caltrans) adopt-a-highway program, and is responsible for patrolling Highway 227 near the Landfill entrance and one mile north and south. The Landfill does respond to complaints from neighbors when trash accumulates off-site.

Based on comments received during the 2007 EIR scoping meeting, fugitive trash is a persistent problem for the Landfill. Some neighbors did recognize that the Landfill was somewhat responsive to their calls, although it was obvious from the comments that the problem was substantial and that existing efforts made by the Landfill were not considered adequate. During field visits to the site and neighboring area by the EIR consultant, some fugitive trash was evident near the Landfill entrance, in the Highway 227 right of way, and on neighboring properties. Plastic bags and paper debris, which are easily carried by the wind, were most common. The drainage was relatively free of debris.

### c. Disease Vectors

A vector is defined as an organism that does not cause disease itself, but which spreads infection by conveying pathogens from one host to another. In a landfill setting, vectors can spread disease by carrying waste containing bacteria, viruses, and other organisms off-site, or by becoming infected themselves and coming into contact with humans and animals in surrounding areas. Potential vectors include, but are not limited to, beetles, flies, rats, vermin, and birds. The Landfill is required to set traps (fly grills, rat traps, sticky tape, etc.) for potential vectors regularly. The results of the trapping activities are made available to the California Department of Resources Recycling and Recovery (CalRecycle) on demand, per Title 27 Subchapter 4, Section 20695. Based on conversations with CalRecycle, there are no reported problems of disease vectors at the Landfill other than a persistent gull population (Hackett, 2008).

Concern was expressed at the 2007 EIR scoping meeting regarding the transmission of pine pitch canker to trees located on properties neighboring the Landfill. Pine pitch canker is a fungal disease that infects many species of pine trees and is transmitted via spores transported by insects, primarily beetles. Trees found in 18 coastal and adjacent counties from San Diego to Mendocino have been infected. In general the California Pitch Canker Task Force recommends composting potentially infected trees through chipping on-site or by delivery to a landfill where they can be composted (Pitch Canker Task Force, 2001).

In response to the 2009 Draft EIR, the applicant submitted a report, prepared by a county-qualified biologist, that the pine trees on the eastern edge of the Landfill, while not in good health, have not been infected by pine pitch canker (Althouse and Meade, 2009).

d. Birds

Gulls remain a persistent problem as both a disease vector and because of their potential impact to airport safety. The Federal Aviation Administration (FAA) believes locating landfills in proximity to airports increases the risk of collisions between birds and aircraft. The 1991 EIR concluded that due to the lack of bird strikes and complaints by pilots, the bird population does not significantly impact airport safety. Since completion of the 1991 EIR, the Landfill has begun maintaining a daily cover of either six inches of compacted soil or alternative daily cover at the end of the operating day, which limits scavenging at night. The Landfill has also established a falcon program to assist in minimizing the number of scavenging gulls at the property. The falcon program has been relatively successful and since release of the 2009 Draft EIR, the Landfill has ceased use of whistles and pyrotechnics to control gulls.

e. Fire Risk

The project is located in a moderate wildland fire hazard zone, due to vegetation and climate conditions (2000 SLO Datafinder). In addition to this California Department of Forestry and Fire Protection (CAL FIRE, formerly CDF) designation, potential fire risk within the Landfill comes from the following sources: on-site fuel tanks, storage of hazardous wastes, composting procedure, and landfill gas. Three aboveground fuel tanks are located on-site. These 6,000-, 10,000-, and 12,000-gallon tanks each provide fuel for Landfill equipment and waste collection trucks.

Landfill gas (LFG) results from the anaerobic decomposition of organic waste deposited in the Landfill. The LFG consists mostly of methane and carbon dioxide, though testing often shows the presence of oxygen and nitrogen as well. Methane is of concern in this EIR because concentrations in the range of 5 to 15 percent by volume in the air create a potential hazard for fire or explosion. It is lighter than air and rises above ground if not covered with a rain-saturated cover soil, impermeable synthetic membrane, or low permeability clay soil.

The existing Gas Collection and Control System (GCCS) consists of 36 vertical gas collection wells and ten horizontal collectors. Collector header piping carries the gas either to the Price Canyon Oilfield steam generation plant or the Landfill flare facility. The oilfield steam generation plant is located approximately 7,500 feet northwest of the Landfill, in Price Canyon. If delivery were disrupted, the Landfill has a stand-by blower and combustion flare. This system would be expanded as necessary for the proposed project. During preparation of this EIR, the San Luis Obispo County Air Pollution Control District (SLOAPCD) and CalRecycle reviewed the proposed project. Both agencies consider the GCCS in compliance with applicable regulations (Hackett, 2008; Carlson, 2008).

f. Compost Operation

The Landfill's Compost Operation (CO) is located southeast of the currently permitted landfill. The CO is currently permitted to accept 300 tons per day. Composted materials include yard trimmings, untreated wood waste, natural fiber products, construction and demolition wood waste, and agricultural material (primarily grape pomace during the crush season). Compost is turned and watered until the process is complete. Wood waste is processed separately (i.e., chipped using a portable tub grinder) and transported off-site for use as cogeneration fuel, or

other off-site use. Due to concerns raised by the public and a number of odor violations issued by CalRecycle, the applicant voluntarily suspended the Compost Operation in September 2010. However, even though the applicant has voluntarily suspended the compost facility portion of the overall operation, the applicant may wish to restart this operation at some point in the future. Therefore, this EIR still evaluates the potential impacts associated with modifying the Compost Operation to allow for more and different materials to be composted.

### 1) Human Health Risks

Subsequent to the release of the 2009 Draft EIR, the County of San Luis Obispo received correspondence from neighbors of the Landfill suggesting that the Compost Operation was affecting the health of neighboring residents. These issues were considered at the November 2010 revocation hearing; however, since that time, the County has prepared a preliminary Health Risk Assessment (HRA) titled “An Assessment of Potential Impacts to Public and Worker Health Posed by the Cold Canyon Landfill and Composting Facility” (Greenberg, 2010). The HRA included a review of air and monitoring data, a health survey and questionnaire, and a health and safety audit. It is included in its entirety in Appendix I, and is summarized below.

#### (a) Review of Air and Water Monitoring Data

This task consisted of a review and evaluation of obtainable air, surface water, and groundwater monitoring data from the Regional Water Quality Control Board (RWQCB), SLOAPCD, SLOCOPHD, Cold Canyon Landfill, CalRecycle, and scientific articles that address potential hazards from composting activities. The reviewed monitoring data included on-site conditions relating to: landfill gas, leachate, groundwater, surface water, and leak detection under lined areas.

Landfill Gas – the combustion of LFG at Cold Canyon Landfill using the candlestick flare has an estimated volatile organic compound (VOC) destruction efficiency of 98 percent and therefore the Landfill is not a significant source of toxic air contaminant emissions.

Leachate – The report noted that no leachate had been detected coming from the unlined portions of the Landfill, and that leachate from the lined portions (Modules 6, 7, and 8) is collected and pumped to a storage tank where it is later applied to the Landfill for dust control. The report included a table of leachate testing from 2007. These results have been part of the ongoing monitoring at the Landfill.

Groundwater – The report summarizes information previously provided by the applicant and the RWQCB’s general assessment of groundwater conditions at the Landfill. The report does not suggest that groundwater has been contaminated in a way that would impact public health.

Surface water – The report notes that there have been recent discharges from the Landfill documented by the RWQCB that may have impacted surface water quality.

#### (b) Health Survey and Questionnaire

The survey questionnaire was designed to elicit relevant data on frequency of complaints, types of complaints, relation of complaints with distance from the compost facility, and if the

complaints could reasonably be attributable to the CO. The interviewees were members of the public that reside near the Landfill and came from a Planning Department list of persons who are interested in the Landfill and CO, and within reasonably close proximity to the Landfill. For in-depth information regarding the survey questionnaire, the reader should refer to Appendix I. The survey results are summarized below.

The results of the health survey and questionnaire data show only a slightly discernable trend regarding the number of complaints and distance from the CO. The data indicate that the majority of the total complaints for the four issues (odor, noise, headache, and breathing difficulties) came from a group located between 0.5 and 0.75 mile from the CO. Six out of six residents in this distance group accounted for 21 out of 58 total complaints (36 percent), which represents 3.5 complaints per person. The group located between 0.75 and one mile from the CO accounted for 18 total complaints (31 percent; 3.0 complaints per person).

Taken individually, reported odor, noise, or headaches also did not show a distance trend. The only category that appears to possibly show a slight trend is reportable breathing difficulties decreasing by distance; however, the number of residents claiming this impact is too small (N=5) to establish distance from the composting facility as a trend.

The number of years living in the area did not show any trend in the survey. However, the assessment concluded that of the 20 residents interviewed, the data is consistent in demonstrating that, at the very least, odor issues and annoying noise do indeed exist in the immediate area of the Landfill and CO.

### (c) Health and Safety Audit

A site visit and audit of the CO was conducted on August 25, 2010. It was performed to identify potential sources of worker exposure, included interviews with workers and management, and determined if State of California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA) regulations pertaining to a composting activity were being implemented on-site.

The following topics were reviewed and evaluated during the audit: site design; operations; personal protective equipment (PPE); training, education, and surveillance; housekeeping; vector control; and odor control. The audit showed that the Landfill is aware of and follows Best Management Practices (BMPs) for maximizing composting action and minimizing odors, with a few exceptions. The audit showed that the CO adheres to Cal-OSHA standards regarding safety and health of the workers with a few exceptions. The audit included a number of recommendations that should be implemented to further protect worker and public health. These have been included as recommended mitigation measures in this section of the EIR.

### g. Odors

An odor is the inhalation through the nose of a gas that produces an olfactory response or sensation. An odor threshold is a sensory property that refers to the minimum concentration necessary to produce this response. Although an odor may be detected, it may not be offensive. Offensive odors rarely cause any physical harm but they may create annoyance. Therefore, odor generators are usually segregated away from potential receptors.

The primary sources of odorous gas emissions at the existing Landfill occur when trash is tipped on to the disposal area and when compost is turned and handled. Leachate and compost runoff water used for dust control could also emit odors. Generally, daytime breezy conditions combined with physical separation from residences helps dilute Landfill related odors for surrounding properties. The Landfill manages the disposal area operation to minimize odorous gas generation and emissions through covering freshly tipped garbage, so at night, when winds may be light, the odor source is controlled or minimized. The Landfill also implements an Odor Impact and Minimization Plan (OIMP) that addresses windrows, acceptance of feedstock, and maintenance of the detention basin in the CO.

In 2009 odor complaints from neighbors increased substantially; CalRecycle received 700 complaints from March 2009 to January 2011 and verified seven complaints between March 2009 and July 2010 (CalRecycle, 2011). During that time, the Landfill had been working with CalRecycle to modify the CO processes. The Landfill retained an expert to further identify problems and formulate solutions. The following changes were implemented:

- Processing incoming feedstock continuously;
- Changing the sizes of the grind/chip operation;
- Changing the windrow turning frequency; and,
- Installation of an odor neutralizing system at the perimeter area and on equipment (grinder and windrow turner).

Each of these measures was designed to either decrease the opportunity for odors and anaerobic conditions to develop, or to neutralize any odors that do develop.

Despite these efforts, neighbor complaints continued and CalRecycle cited the operation for odor violations for three consecutive months. Because the Landfill believes that the thresholds for odor compliance are unrealistically low, they chose to temporarily suspend the CO in September 2010 rather than continue to process greenwaste and risk additional violations. Portions of the greenwaste now collected are being used as landfill Alternate Daily Cover (ADC), and spread over the working face at the end of each day. The Landfill is also transferring unused greenwaste to a facility in Santa Maria for composting. Contaminated greenwaste (e.g., trees or tree trimmings infected with pine pitch canker, etc.) is kept on-site and not transferred off-site.

## **2. Regulatory Setting**

Hazards and hazardous material management is subject to multiple laws, policies, and regulations at all levels of government. The agencies responsible for enforcing applicable laws and regulations develop and enforce standards for the handling and clean-up of specific materials determined to pose a risk to human health or the environment. The enforcing agency at the local level for the proposed project area is San Luis Obispo County Health Agency, Division of Environmental Health. At landfills, CalRecycle is the agency that synthesizes the various federal and state enforcement agencies (such as the Environmental Protection Agency [EPA] and the RWQCB) into a more cohesive set of regulations (Title 27). These agencies and regulations are provided below.

a. Federal Policies and Regulations

1) Federal Occupational Safety and Health Administration

The Federal Occupational Safety and Health Administration (OSHA) regulates a Process Safety Management Standard (29 CFR 1910.119) with requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. Some of the requirements of this standard include: all information pertaining to the hazardous chemicals shall be available to the employees; employees shall be given training on the operation of equipment with hazardous materials; and the employer is required to perform a process hazard analysis.

2) U.S. Department of Transportation

The U.S. Department of Transportation regulates hazardous materials transportation between states under Title 49, Chapter 1, Part 100-185 of the Code of Federal Regulations. Within California, Caltrans and the CHP enforce federal law. Together, these agencies determine driver training requirements, load labeling procedures, and specifications for container types to be used.

b. State Policies and Regulations

1) CalRecycle (formerly California Integrated Waste Management Board)

CalRecycle has recently merged its duties with those of State Department of Conservation's Division of Recycling to best protect public health and the environment by effectively and efficiently managing California's waste disposal and recycling efforts. CalRecycle acts as the County's Enforcement Agency (EA) to insure compliance with many state landfill and compost regulations. Title 27, Chapter 3 (Criteria for all Waste Management Units, Facilities, and Disposal Sites) ensures liner systems and leachate management systems are designed and constructed to substantially reduce the potential for release of leachate. This chapter also outlines procedures that shall be followed for fire control (Subchapter 4, Article 5), gas monitoring (Subchapter 4, Article 6), and vector control (Subchapter 4, Article 2).

Odors from the CO are currently regulated by CalRecycle for San Luis Obispo County (the SLOAPCD monitors odors from the land disposal area). The OIMP regulatory requirements can be found in Title 14 of the California Code of Regulations (Sec. 17863.4). An OIMP is required for all compostable materials handling operations and facilities, with the exception of agricultural composting operations without odor complaints, and must be submitted to the EA as part of their notification or solid waste facility permit application. The OIMP must be reviewed annually by the operator to determine if any revisions are necessary. Any revisions to the OIMP are to be submitted to the EA within 30 days of those changes.

2) California Occupational Safety and Health Agency

Worker health and safety in California is regulated by Cal-OSHA. Cal-OSHA standards and practices for workers dealing with hazardous materials are contained in Title 8 of the CCR, and include Division 1, Chapter 4, Subchapter 7 (General Industry Safety Orders) and Section 5192 (Hazardous Waste Operations and Emergency Response). General construction regulations are found in Division 1, Chapter 4, subchapter 4 (Construction Safety Orders). Cal-OSHA offers

on-site evaluations and issues notices of violation to enforce necessary improvements to on-site health and safety practices to achieve compliance with regulations.

### 3) Emergency Services Act

Under the Emergency Services Act, the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an important part of the plan, which is administered by the California Office of Emergency Services. The office coordinates the responses of other agencies, including EPA, CHP, regional water quality control boards, air quality management districts, and county disaster response offices.

### 4) Electronic Waste Recycling Act

The Electronic Waste Recycling Act, SB 20, was signed into law on September 24, 2003, and amended by SB 50 (Stats. 2004, ch. 863) on September 29, 2004. The Act requires a specific collection and recycling of certain E-wastes, separate from general landfill procedures.

### 5) California Universal Waste Law

Signed into law on February 8, 2006, the California Universal Waste Law requires households and small businesses to dispose of U-waste at a household hazardous waste collection facility. Universal Waste comprises items that contain low levels of hazardous materials, and includes fluorescent lights, household batteries and certain types of electronic waste (televisions, computer monitors, and related computer peripherals). This law is administered by the Department of Toxic Substances Control (DTSC).

## c. Local Policies and Regulations

### 1) San Luis Obispo County Air Pollution Control District

The federal and state Clean Air Acts are enforced locally by the SLOAPCD. The SLOAPCD regulates potential discharges of criteria air pollutants (including organic compounds that contribute to ozone formation) and toxic air contaminants. Refer to Section V.C., Air Quality, for more information. The SLOAPCD is also the agency responsible for responding to odor complaints at the Landfill, unless those complaints are related to the CO, in which case CalRecycle is the responsible agency.

### 2) San Luis Obispo County Public Health Department

Pursuant to state law and local ordinance, the SLOCOPHD conducts inspections to ensure proper handling, storage, and disposal of hazardous materials and proper remediation of contaminated sites. In addition, the Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act [i.e., Chapter 6.95 of Division 20 of the California Health and Safety Code]) requires that any business that handles or stores hazardous materials prepare a Hazardous Materials Business Plan. Under this law, businesses are required to submit inventories of on-site hazardous materials and wastes and the locations where these materials are stored and handled. This information is collected and certified by SLOCOPHD for emergency response purposes. SLOCOPHD typically also coordinates with the County Department of Planning and Building and provides input on projects that could have potential associated health risks.

### 3) San Luis Obispo County Conditions of Approval for the Landfill, Materials Recovery Facility and Compost Operation

Conditions of approval from three different land use permits currently regulate components of the Landfill. These conditions would be superseded by the conditions of approval for the proposed project, if approved.

## 3. **Thresholds of Significance**

### a. CEQA Guidelines

Appendix G of the CEQA *Guidelines* states that a project would normally have significant impacts if it would create a potential health hazard or involve use, production, or disposal of materials that pose a hazard to people, animal, or plant populations in the area affected. The County's Initial Study also provides a similar assessment relating to hazards and hazardous materials. For the purposes of this analysis, an impact would be considered significant if the project would:

- Create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or planned school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will create a significant hazard to the public or the environment; or,
- Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses.

### b. Odor Thresholds

The thresholds of significance for odors vary based on the regulations used by different agencies that relate to odors. Neither CalRecycle, SLOAPCD, nor the County of San Luis Obispo use a numerical or a quantified regulatory standard to identify the intensity of odors that may be acceptable or unacceptable. CalRecycle regulates odor sources as potential nuisances. A nuisance at a solid waste facility is defined by CalRecycle as a storage, removal, transport, processing, or disposal activity which "is injurious to human health or is indecent or offensive to the senses and interferes with the comfortable enjoyment of life or property," and "affects at the same time an entire community, neighborhood or any considerable number of persons" (14 Cal. Code Regs. §17402(a)(12); 27 Cal. Code Regs. §20164).

The SLOAPCD CEQA handbook notes that when a sensitive receptor (residential or recreational use, for example) is proposed within 1 mile of a Compost facility or Sanitary Landfill (or vice versa), the project should be referred to the SLOAPCD Enforcement Division and that the analysis of potential odor impacts should be based on “a review of odor complaints for similar facilities.” No specific threshold of significance is identified however. It should be reiterated that technically CalRecycle responds to odor complaints for compost facilities and the SLOAPCD responds to those for the rest of the Landfill.

The Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines (BAAQMD, 2010) suggests that an appropriate threshold of significance for odors is five complaints per year, averaged over three years. The odors prompting a complaint must be confirmed by a third party to be considered valid. Because it provides the only real quantifiable threshold, for purposes of this EIR, the BAAQMD threshold is used to determine impacts; however, the analysis considers other factors as well, including distance and whether or not the project would “interfere with the comfortable enjoyment of life or property.”

#### **4. Impact Assessment and Methodology**

The EIR impact analysis focuses on potential health risks associated with the proposed project, particularly from surrounding land uses where the potential for hazardous material release could be encountered and affect the project site and surrounding area. Methodology for assessing the proposed project includes a review of existing regulatory plans and policies to determine the proposed project’s consistency with these documents. A number of hazards specific to landfills, such as gas production and vector control have been evaluated based on state guidelines and the historical record of compliance at the site. Field inspections of the existing facility were performed a number of times by the EIR consultant. Material acceptance procedures, sorting, bird control, litter removal, the application of alternative daily cover, dust control and litter control fencing, among other activities were observed. This section also relies heavily on information prepared by the County for the November 2010 revocation hearing, and the Health Risk Assessment prepared by the County (Greenberg, 2011).

#### **5. Project-specific Impacts and Mitigation Measures**

##### **a. Construction Activities**

Accidental releases of hazardous materials, such as fuels or lubricants during construction activities (i.e., refueling, repairs to heavy machinery, transport of fuels), have the potential to adversely affect on-site workers, public health, and/or the environment. Spillage of fuels or chemicals could result in a threat of fire or explosion or other situations that may pose a threat to human health and/or the environment. Releases could occur as a result of vehicular accidents, equipment malfunction, or improper storage. Cal-OSHA requires construction projects to implement safe hazardous material handling and storage, and proper transfer of materials (e.g., refueling) and vehicle maintenance (e.g., oil changes, washing). Title 27 of the California Code of Regulations also requires that personnel at the site be trained in subjects pertinent to the site operation and maintenance, with emphasis on safety, health, environmental controls, and emergency procedures. It also requires that records of the training be kept. Occupational safety

is a training topic for all employees of the Landfill. Based on discussions with CalRecycle staff, the Landfill is in compliance with applicable occupational safety regulations (Hackett, 2008).

Projects are required to have designated staging/maintenance areas, standard operating procedures, and emergency response planning. Compliance with Cal-OSHA and Title 27 requirements would reduce any potential impacts to *a less than significant level (Class III)*. No additional mitigation is required.

b. Household, Electronic, and Universal Hazardous Waste Collection & Storage

The severity of potential impacts related to the accidental release of hazardous materials depends on the quantity (and/or concentration) and type of the material and its storage method, the location where it is stored and used, the toxicity or other hazardous characteristics of the material, and whether it is transported, stored, and used in a solid, liquid, or gaseous form. The risk of the material's exposure to the environment and possible impact is a result of the interaction of these characteristics.

Increases in population in the Landfill service area would likely result in an increase in the amount of hazardous waste, E-waste, and U-waste accepted at the Landfill, potentially creating significant hazards associated with improper storage and handling. The proposed project would, however, include moving the existing E-waste and U-waste collection facility to an 80-foot by 30-foot metal building to store and process U-waste and E-waste, and to better receive customers and conduct operations. The proposed relocation would provide an opportunity to make it more convenient for the public to use the E-waste facility (due to its size and location) than it currently is, reducing the potential that these materials would be disposed of in the permanent disposal area.

CalRecycle Title 27 Section 20870 (Hazardous Wastes) requires operators of all Municipal Solid Waste Landfill Facilities (MSWLF) to implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes, as defined in 40 CFR Part 261, and polychlorinated biphenyls wastes, as defined in 40 CFR Part 761, in landfills that are not permitted to accept them, such as Cold Canyon Landfill. The Landfill currently conducts random checks of tarped loads at the entrance and has personnel monitoring both the RRP and the disposal areas for hazardous materials. During field visits by the EIR consultant no tarped loads were inspected at the entrance; however, Landfill staff was observed throughout the RRP directing the public to the appropriate recovery bins, and sorting materials. Compliance with Title 27, Section 20870 would reduce impacts associated with handling, storage, and safe transport of household hazardous, E-waste, and U-waste at the landfill to *a less than significant level (Class III)*.

c. Fugitive Trash

During the EIR scoping process, the public expressed concerns regarding fugitive trash in surrounding residential areas and along road systems used by haulers to reach the Landfill. Many complaints were that litter had blown from the Landfill site, escaped from delivery trucks, or had been dumped by County residents outside of the Landfill property. Additionally, the drainage swale in the expansion area has the potential to carry trash off-site.

In 1989, the applicant established a litter control program to reduce potential litter-related nuisances. To prevent fugitive trash, the Landfill compacts waste immediately after disposal in modules, implements a tarping/cover program for all delivery vehicles, and minimizes the size of the working face of the disposal area. To prevent windblown litter, portable and stationary metal and plastic litter control fences are located downwind and near the disposal area working face. These fences are generally four to six feet tall, but may be as high as ten feet. Manual pick-up also occurs. The Landfill is also responsible for patrolling Highway 227 near the entrance and one mile in either direction.

During inspections of the Landfill disposal area by the EIR consultant, litter control fences were observed in place. The fences varied in height and material. Those directly downwind of the working disposal area faces were catching blowing debris, although given that they need to be far enough away from the working face to allow vehicles to enter the area and heavy equipment to move and compact the waste, it was obvious that trash that was easily lifted by the wind, such as plastic bags and lighter paper products mixed with debris, were easily carried up and over containment fencing. In some cases this debris came to rest on the property boundary fence or in trees on-site. In other cases the trash was blown off-site. Given that the expanded disposal area would move closer to the prevailing downwind property line, it is less likely that windblown material would come to rest on the Landfill property and more likely to instead migrate to adjacent properties.

California Vehicle Code 23115(a) states "No vehicle transporting garbage, swill, used cans or bottles, wastepapers, waste cardboard, ashes, refuse, trash, or rubbish, or any noisome, nauseous, or offensive matter, or anything being transported for disposal or recycling shall be driven or moved upon any highway unless the load is totally covered in a manner that will prevent the load or any part of the load from spilling or falling from the vehicle." Signage at the Landfill entrance notifies the public of the new law and associated fines. Those that arrive at the Landfill without their loads covered are assessed an additional fee.

Noise mitigation, which would require the construction of an earthen berm along the southeastern boundary of the site (refer to Section V.I., Noise), and implementation of the proposed landscaping plan (refer to Section V.A., Aesthetic Resources) may also assist in controlling blowing debris from the site, as prevailing winds blow from the northwest to the southeast. Having a landscaped berm in place may act as a barrier, preventing some trash from leaving the site, as blowing debris is sometimes caught in trees. This can be seen at times in trees located south of the MRF. However, even with these measures, and the litter control program, fugitive trash is expected to be a continuing problem for neighbors of the Landfill.

Based on comments received at the public scoping meeting for this EIR, there are occurrences where waste is illegally dumped outside the entrance to the Landfill on neighboring driveways and property because the Landfill was not open when the load was being delivered. This illegal dumping, another form of fugitive trash, may be reduced due to the proposed increase in operating hours at the Landfill; however, it is still considered a potentially significant impact requiring mitigation.

**HAZ Impact 1**      **Fugitive trash would migrate or be disposed of outside of the Landfill property due to collection trucks, windblown materials, illegal dumping, and flowing water.**

Implement AES/mm-13, **Landscape Plan**, and NS/mm-1 and NS/mm-2, **Noise Mitigation Plan**.

HAZ/mm-1      **Project Notification.** To encourage legal disposal of waste material, **prior to issuance of the Notice to Proceed**, the applicant shall notify all customers in the service area of the facility of the change, through mail updates, the phone system, the Landfill website, and through on-site signage, which materials may be accepted at the new facility, and when the new facility will be open to accept them. Updates shall be provided periodically as project components are relocated or expanded.

HAZ/mm-2      **Litter Control Plan. Prior to issuance of the Notice to Proceed**, the applicant shall submit to the Department of Planning and Building, an updated Litter Control Plan. The plan shall be approved by the Department of Planning and Building and CalRecycle, and be posted on the Landfill website. The plan shall be updated at minimum every five years, and include at a minimum:

- a. Descriptions of current litter control practices.
- b. Provisions for bi-monthly trash pick-up on neighboring properties. Residents within one mile of the Landfill shall be contacted annually and provided the dates of scheduled fugitive trash pick-up for the coming year. The phone number of the litter control staff at the Landfill shall be provided to the neighbors, and permanently posted at the project entrance at a location that is easily visible from the closed gate. Neighbors shall be able to contact the Landfill within one week of the scheduled date to request pick-up of fugitive trash on their property.
- c. Requirements for litter control fences to be installed around the downwind perimeter of the Landfill (i.e., southeast and southwest property lines) that are a minimum of six feet tall.
- d. Requirements for portable litter control fences installed near working faces to be a minimum of ten feet tall.
- e. Descriptions of the litter barrier proposal (permanent and temporary) for construction of each proposed new module. Barriers and working faces should be oriented to address prevailing winds.
- f. Contact information so that the public can reach agency staff (CalRecycle, County Code Enforcement, CHP, Sheriff) in the event

that the Landfill does not comply with control measures or to report illegal dumping.

- g. Requirements for fencing along the drainage that restrict trash from entering the drainage swale from the Landfill and entrance road, but allow for the passage of wildlife, as necessary.
- h. The Landfill litter control phone number shall also be available to receive calls relating to Landfill and truck operator-based refuse that is found along the truck haul routes within five miles of the Landfill. Such complaints shall be investigated within one week of receiving the call, including any special pick-up of refuse found, unless Caltrans or County Public Works identifies the need for special measures to address traffic safety issues.

*Residual Impact* With implementation of these measures, fugitive trash impacts would be reduced. However, given the high winds, and the fact that blowing trash, such as plastic bags, would be nearly impossible for the Landfill to control, the impact would not be reduced to a level of insignificance. The impact is *significant and unavoidable (Class I)*.

*Secondary Impact* Installation of temporary litter control fences would not result in any new aesthetic impacts. Ten feet is lower than the active workface and they would not necessarily be more noticeable than the heavy equipment and the workface. Visual resources mitigation previously proposed to screen the Landfill and activities as seen from Highway 227 would also provide some screening for the fences. No additional mitigation is required.

#### d. Disease and Animal Vectors

The proposed project would include an increase of daily tons of solid waste and compost materials. The increasing of capacity has the potential to attract additional vectors such as flies, rodents, and birds that can spread infectious diseases to humans.

Preventative measures are currently applied to decrease or eliminate accessibility of Landfill materials to vectors. These measures include covering the active work face with soil or greenwaste at the end of each working day and frequent compaction of trash. No vector problems, other than birds (refer to the following sub-section, 5.e.), were noted by neighbors of the Landfill during scoping meetings, or by regulatory agencies, including CalRecycle (Hackett, 2008).

Compliance with CalRecycle Title 27, Section 20810, would be adequate to control or prevent the propagation, harborage, or attraction of flies, rodents, or other vectors. There is no indication that measures other than these are necessary to control vectors. With the exception of birds (which are discussed in the following sub-section, 5.e.), impacts associated with disease vectors would be considered *less than significant (Class III)*. No additional mitigation is required.

e. Birds

The proposed increase of waste and addition of accepted materials is expected to be an attractant to gulls and other scavenging birds. *The San Luis Obispo Airport Land Use Plan* identifies uses which attract birds and create bird strike zones as a hazard to air navigation creating safety hazards to passengers, employees, and aircraft. The concern is that birds may impact the windshields, engines, or propellers of the aircraft, making them partially or completely inoperable. The San Luis Obispo County Regional Airport is located approximately 3.5 miles to the northwest of the Landfill. In the 20 years between 1990 and 2010, there were approximately 49 bird strike incidents reported at the San Luis Obispo airport (SLOCRA, 2010). Birdstrikes occurred during takeoff, landing, descent, and during other maneuvers. In many cases the bird species could not be identified; however species included gulls, meadowlarks, ducks, hawks, a kestrel, owl, finches, sparrows, turkey vultures, and a pigeon.

The project would not necessarily result in larger or additional exposed working faces within the Landfill modules. Consistent with CalRecycle regulations, preventative measures are currently applied to decrease or eliminate accessibility of disposal area materials to birds, including covering the active working face and frequent compaction of trash. Currently, falcons are used as a method to discourage birds from roosting and feeding at the Landfill. These practices have been active during multiple site visits by the EIR consultant. These measures reduce the potential number of birds at the Landfill and subsequently reduce the potential that the birds would spread disease away from the Landfill. It also reduces the risk that birds would affect aircraft.

**HAZ Impact 2      Increasing waste disposal has the potential to attract birds, increasing potential hazard to air traffic using the San Luis Obispo County Regional Airport.**

Implement NS/mm-8, **Noise Monitoring – RRP Redesign & Verification.**

HAZ/mm-3      **Additional Bird Deterrent Program.** In the event that a hawk/falcon program proves unsuccessful, the Landfill shall implement additional bird deterrent strategies. These strategies may include use of kites, reflectors, and/or overhead wires, as applicable. The success of the program shall be monitored in conjunction with the odor monitoring recommended in HAZ/mm-10 below.

HAZ/mm-4      **Birdstrike Monitoring. Prior to the Notice to Proceed and prior to construction of each subsequent disposal area module,** the applicant shall provide verification that birdstrikes for approaching airplanes (those most likely to be affected by birds attracted to the Landfill) at the SLO Airport have not increased due to the operations at the Landfill. Verifying evidence shall include available birdstrike information compiled by the San Luis Obispo County Regional Airport, and include the location of strikes and the type of bird involved (if available).

*Residual Impact* With implementation of this measure, the impact would be mitigated to a *level of insignificance (Class II)*. No additional mitigation is required.

*Secondary Impact* Using an overhead wire “grid” system to control birds would potentially introduce an additional visual element to the disposal area and could periodically silhouette from some public roads when work occurs near a ridgeline or topographic highpoint on the site. Poles would need to be erected to support the grid. These would potentially be 20 to 30 feet in height and visible from public view corridors. Grids are made of thin wire spaced between one and two meters and would not necessarily be visible enough to significantly impact visual resources – particularly when considered in conjunction with the other activities in the disposal area (e.g., heavy equipment, Landfill infrastructure, litter fencing, etc.) No additional mitigation is required.

f. Fire

A fire at the Landfill would result in smoke, odors, structural damage, injury, and the release of potentially toxic fumes. The Landfill is located in a moderate fire hazard zone due to surrounding vegetation and local climate. The proposed project expansion is not expected to alter this ranking nor affect emergency response from local services, which has been estimated to be between five and ten minutes by CAL FIRE. The following is a list of potential fire hazards at the Landfill and the existing regulations that address and minimize them, when applicable.

1) Household, Electronic, and Universal Hazardous Waste Collection & Storage

Collected and temporary storage of household hazard wastes, E-wastes, and U-wastes will increase following construction of expanded facilities. Some of the material making up these products could be highly flammable. The increased amount of this material will have a commensurate increase of potential toxic air contaminants should a fire occur.

2) Compost

Composted material can present a fire hazard if moisture content of the vegetation becomes too low. The proposed project would potentially increase the amount of compost material accepted from 100 tpd (typical rate in recent years) to 300 tpd.

Title 14, Chapter 3.1, Article 6 requires landfill operators to “provide fire prevention, protection and control measures, including, but not limited to, temperature monitoring of windrows and piles, adequate water supply for fire suppression, and the isolation of potential ignition sources from combustible materials. Fire lanes shall be provided to allow fire control equipment access to all operation areas.” These activities are currently occurring at the Landfill and would continue with the expansion.

3) Landfill Gas

Uncontrolled accumulation of landfill gas increases the potential for explosion and fire hazard. The volume of landfill gas would increase with the proposed increase of accepted waste. The

project includes expanding the Landfill Gas Monitoring Program and the Landfill Gas (LFG) Collection System. Vertical gas collection wells and collection headers will be connected to a main header pipe. The project description includes an increase in the size of the existing blowers and standby LFG flare to compensate for the increase in LFG flow resulting from the proposed larger Landfill area. Title 27 Section 20919.5 (Explosive Gases Control) requires minimum standards for collection of landfill gas. These include ensuring the concentration of methane gas generated by the facility does not exceed 25 percent of the lower explosive limit for methane in facility structures and that the concentration of methane gas does not exceed the lower explosive limit of methane at the facility property boundary area, among other things. Compliance with these conditions is verified by CalRecycle and the SLOAPCD. Based on discussions with those agencies, the Landfill is in compliance with applicable gas regulations (Hackett, 2008; Carlson, 2008) and it is expected they would continue to be in compliance with these regulations should the expansion be approved.

#### 4) Other Operations

Construction and operation of structures and facilities and use of heavy equipment would expose employees and neighboring residences to accidental fire. Three aboveground fuel tanks are located on-site and provide fuel for on-site equipment and waste collection trucks. These existing fuel storage tanks and fuel dispenser would be relocated close to the new equipment maintenance building. The continued presence of the three tanks still retains the potential for explosion or fire risk.

CAL FIRE provided comments on the project in May 2006. Their comments include a list of California regulations applicable to the project. In addition, site specific conditions to address potentially significant fire safety impacts resulting from the proposed project were included. These conditions require specific road widths, water tank size, suppression systems, and the development/amendment of a Fire Prevention, Control, and Mitigation Plan.

**HAZ Impact 3            Construction activities, expansion, and ongoing operation of the Landfill would potentially expose employees and adjacent residents to accidental fire.**

HAZ/mm-5            **Fire Prevention, Control, and Mitigation Plan. Prior to issuance of the Notice to Proceed, the applicant shall provide verification that a Fire Prevention, Control, and Mitigation Plan has been developed/amended to the satisfaction of CAL FIRE.**

*Residual Impact*            Compliance with applicable CalRecycle regulations, the requirements of the California Fire Code, as interpreted by CAL FIRE, and implementation of the mitigation measure would reduce impacts to a *less than significant level (Class II)*. No additional mitigation measures are required.

g. Compost Operation Hazards

1) Noxious Weeds

The biological reports prepared for the proposed project noted a number of introduced plant species located at the Landfill. No populations of invasive species that exist in the County, such as pampas grass, tree tobacco, yellow star thistle, or giant arundo, were identified on-site during biological resource surveys. Significant populations of pampas grass and tree tobacco do exist south (downwind) and west of the site (approximately 1 mile), in Price Canyon, at the surface mine south of the Landfill, and near Noyes Road. Because of the distance between the CO and these areas of invasive/noxious weeds, it does not appear that the CO is responsible for the spread of noxious weeds.

2) Pathogens

The practice of composting yard trimmings, untreated wood waste, natural fiber products, construction and demolition wood waste, and agricultural material has the potential to transfer vegetative and arboreal diseases. Residents voiced concern during the EIR scoping process that pine pitch canker would spread to pines surrounding the Landfill property. Pine pitch canker affects many native pines in California. It is caused by a fungus which produces airborne spores that can be spread by wind and carried by native insects. Long-distance spread is more likely to result when people transport insect or pathogen-infested logs, nursery stock, seeds, or soil. Composting wood chips and greenwaste should greatly reduce or eliminate the potential for disease spread (Pitch Canker Task Force, 2008). Based on information provided by the Landfill (Althouse and Meade, 2009) the pine trees southeast of the Compost Operation are not in good health, but have not been affected by pine pitch canker.

Another plant disease of potential concern in San Luis Obispo County is Sudden Oak Death (SOD). SOD was first detected in 1995 and affects three oak species, including coast live oak, California black oak and Shreve oak. Additional species affected include rhododendron, madrone, California huckleberry, California bay laurel, California buckeye, big-leaf maple, toyon, and manzanita. The disease is currently known to exist in the coastal ranges of California, between Big Sur in Monterey County and southern Mendocino County. Sudden oak death has been confirmed in Alameda, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties. It has not yet been confirmed in San Luis Obispo County. There is no known "cure" for trees infected with SOD, although solarizing infected material (i.e., covering with clear plastic and exposing it to the sun) may kill it and keep it from spreading. One of the major mechanisms of dispersal is rainwater splashing spores onto other susceptible plants (UCD IPM, 2008).

Much of the greenwaste entering the Landfill is delivered via enclosed commercial trucks, which reduces the threat of spreading diseased material during transport. Required tarping of incoming greenwaste loads further reduces the threat. Once at the facility, material is contained during processing through dust control (watering). Once composted, the material is free from monitored pathogens. Composted material has been tested regularly and no significant levels of metals or pathogens have been detected (Hackett, 2008). The Landfill also tests for salmonella, which is not required by law. Continued compliance with CalRecycle compost testing

regulations would help verify the success of the CO to eliminate disease from greenwaste material.

Given that SOD has not been identified in the service area of the Landfill, the threat that the CO may result in the spread of the disease is reduced. However, the disease may be transported by commercial haulers or members of the public to the facility. In addition to the potential for introduction of SOD, the County Department of Agriculture has also indicated that transfer of unprocessed greenwaste to and from the CO could result in the spread of noxious pests such as the Light Brown Apple Moth (LBAM).

The LBAM was first confirmed in Alameda County, California on March 22, 2007. The California Department of Food and Agriculture (CDFA) aggressively surveyed the area and identified the pest in 11 additional counties, including San Luis Obispo. LBAM is of particular concern because it can damage a wide range of crops and other plants including redwoods, oaks and many other varieties commonly found in California's urban and natural environment. The list of agricultural crops that could be damaged by this pest includes grapes, citrus, stone fruit (peaches, plums, nectarines, cherries, apricots) and many others (USDA, 2010).

**HAZ Impact 4      The Compost Operation would potentially result in the unintended spread of plant disease such as SOD and unwanted pests such as the LBAM.**

HAZ/mm-6      **Plant Disease Education Program. Prior to Issuance of the Notice to Proceed,** the applicant shall develop educational materials regarding SOD and LBAM for public and private customers dropping off greenwaste at the Landfill. The information shall include descriptions of the distribution of the diseases, how to identify them, management practices for dealing with infected trees, and disposal guidelines. Material shall be produced in coordination with the County Department of Agriculture. This information shall also be posted on the Landfill website directly or by a link to another site.

HAZ/mm-7      **Export/Transfer of Greenwaste.** If any portion of greenwaste/woodwaste program includes exportation or transfer of any pre-composted material off-site, the following shall apply:

- a. Prior to re-establishing compost operation, the operator shall contact the County Department of Agriculture to determine any known problematic insects or pathogens, and/or quarantine areas that relate to greenwaste or wood waste. A vector control program shall be established for affected haulers where material brought on-site shall be kept separate.
- b. On a quarterly basis, or as determined appropriate by the County Department of Agriculture, the operator shall contact the County Department of Agriculture relating to the discovery or containment of

problem pests. If such situations develop, the operator will comply with the County Department of Agriculture's recommendations to ensure containment and avoid the spread of the identified vector.

*Residual Impact*

Given the amount of processing (unloading, moving, shredding, chipping, hauling, screening) that must occur when preparing greenwaste for composting, it is considered infeasible to completely control the spread of pests and disease. It should be reiterated however, that composted material eliminates this threat, and in that sense, the proposed project would be providing a countywide beneficial service because it is providing a designated location where contaminated material can be disposed of properly. Dust control measures in this EIR would further reduce the potential for pathogen impacts. This impact is considered *significant but mitigable (Class II)*. No other mitigation is required.

### 3) Human Health Risks

The HRA prepared for the CO noted that, in general, composting operations are sources of ammonia, respirable dust, and bioaerosols that contain bacteria, endotoxins, and molds at varying times of the year and at varying concentrations (Greenberg, 2011). The assessment notes that monitoring data from other composting facilities across the country show that the airborne concentrations of dust, ammonia, bacteria, endotoxins and molds in bioaerosols coming from greenwaste are often many times higher than those coming from composting piles made from food wastes and sewage sludges. Since a significance threshold for levels of bacteria, molds, and endotoxins has not been established, maintaining practices that limit the production, dispersion, and public exposure should be implemented.

Additional studies have shown that the airborne concentrations of the pathogens in the compost bioaerosols diminish greatly over distance (down to background levels at 650 feet). Prevailing winds in the vicinity of the Landfill are from the northwest. The existing CO is greater than 650 feet from the nearest downwind property line. The future CO would be moved to the top deck, a location which is further upwind from that same property line. Because of this distance, the CO would not result in significant health risks to the public on neighboring properties (Greenberg, 2010).

According to this same report, the public which comes on-site to the CO, either to drop off greenwaste or pick-up finished mulch material for personal use, experiences greater exposure than on-site workers and hence the greatest health risks.

The HRA noted that in general the CO was implementing BMPs for compost facilities, but also noted several deficiencies that could increase risks to human health. These include, but are not limited to, the following:

- No artificial windbreaks or trees were strategically placed to assist in the reduction of odors moving off-site and no berms were located on the south end of the project site thus allowing free movement of air onto or from the composting area.

- The heavy equipment used at the CO does not have “environmental cabs” with climate control, HEPA filters, or special door seals that are regularly inspected and replaced, to ensure a controlled environment for the operator.
- Workers are not required to wear dust masks and most do not wear them during loading, screening, turning, or while in the cab.

**HAZ Impact 5      Exposure of the public and workers to bioaerosols on-site at the Compost Operation could result in significant impacts to public and worker health.**

HAZ/mm-8      **Compost Operation – Reductions to Health Risks.** To reduce potential health risks, the following measures shall be implemented at the CO during acceptance, processing and transport activities:

- a. Generation of dust during any movement of compost material or greenwaste shall be kept to a minimum by adding additional moisture via a water spray system and establishing a “high wind” shut-down level for activities that generate dust. Dust clouds shall not be visible more than 5-10 feet away from the source, including windrows, processing equipment, etc.
- b. The cabs of heavy equipment shall be inspected regularly for poor window and door seals, and worn seals replaced upon detection. Workers at or near the compost facility shall wear N95 dust masks (or comparable level masks) when not inside a heavy equipment cab, auto, or truck when turning, grinding, screening, or the movement of any compost or greenwaste material is occurring.
- c. A baseline air monitoring evaluation program shall be implemented to verify that bioaerosol levels are at background levels at the property line. A follow-up monitoring program shall be established based upon the results of the baseline evaluation to verify levels do not increase over time as the CO expands and/or feedstocks vary.
- d. Workers shall be trained in housekeeping procedures and encouraged to change clothes daily at the facility. A medical surveillance program for workers shall be established to ensure early identification of symptoms related to Organic Dust Toxicity Syndrome. This program should include, among other components, tetanus and Hepatitis A vaccinations, health checks prior to commencing employment to identify predisposing conditions, instructions to report any unusual respiratory symptoms to management, and annual medical exams.

- e. Prior to re-establishment of the Compost Operation, windbreaks around all four sides of the compost operation shall be established, applying one or more of the following strategies:
- If berming is used it shall appear as natural as possible, or blend with the existing topography;
  - If vegetation is used, a landscape plan shall be submitted that includes fast-growing and evergreen vegetation that will provide a solid screen of adequate height within five years; this vegetation would be maintained for the life of the project and be kept in a healthy and vigorous condition; and/or,
  - If a man-made barrier is used, it shall be at least four feet above top of windrows; it shall use visually attractive materials and design and the materials used shall be dark (chroma and value of 6 or less per the Munsell Book of Color); this structure shall be kept in good working order for the life of the project.

*Residual Impact* Implementation of these measures reduces the potential for the CO to affect the health of neighbors, the public, and workers to a *less than significant level (Class II)*. No additional mitigation is required.

#### h. Odors

The amount of material received by the Landfill is projected to increase about three percent annually over the life of the project. Odor generation would vary based on the types of organic material received on any given day, by the processing of these materials, and by the weather. This increase in quantity would potentially release more odorous gasses and would potentially cause a nuisance to downwind residents.

Odors were considered one of the significant issues discussed by neighbors of the Landfill at the EIR scoping meeting and during the CO revocation hearing. In addition, CalRecycle confirmed seven odor complaints during a 14-month period in 2009 and 2010. While not over a three-year period, this level of confirmed complaints would exceed the BAAQMD thresholds for significance (CalRecycle also notes in 2011 correspondence that the number of confirmations would potentially be higher, but the CalRecycle inspector for the Landfill is located out of the County and not available to conduct field visits immediately upon receipt of the numerous complaints filed).

Odor complaints are generally focused on the CO, and neighbors have suggested that odors are most offensive during warmer weather periods and/or when the compost rows are turned. Odors may also be produced by decomposing waste on the working face of the disposal areas, although these are minimized through application of daily cover. The prevailing winds at the site are from the northwest, and as a result odors are most noticeable to residents living southeast of the Landfill. Leachate water, which is used for dust control, may also emit odors,

Based on comments at the scoping meeting and during the revocation hearing, residents that find the odors a nuisance are located as far as one mile or more south of the existing CO location, although the HRA questionnaire noted that the majority of complaints were from residents located 0.5 to one mile from the CO. The number of odor complaints received over the last few years indicates that odors would likely exceed the five complaint per year threshold established by the BAAQMD and could be considered a nuisance by CalRecycle.

The proposed relocation of the CO would be approximately 1,500 feet north (upwind and farther from residences currently affected by odors) and 100 feet higher than the current location. These changes may result in odors from the CO to be more dispersed (diluted) by the prevailing northwest wind as they extend beyond the southern project boundaries. Even with the new location of the CO and implementation of updated OIMP, it is anticipated that during certain combinations of meteorological conditions (e.g., summer heat) odors would remain significant to residents downwind.

**HAZ Impact 6 Waste processing at the permanent disposal area and Compost Operation would potentially result in increased odors.**

HAZ/mm-9 **Compost Operation – Aerated Static Pile.** Upon re-establishment of the Compost Operation, to reduce odors from the composting material, the applicant shall implement a covered ASP (aerated static pile) composting system. The ASP shall include an aeration system that includes biofilters to control odors.

HAZ/mm-10 **Compost Operation – Best Management Practices.** To reduce odors from the Compost Operation and disposal areas, the applicant shall incorporate all applicable BMPs as developed by CalRecycle into the OIMP updates **in perpetuity**. These BMPs may include, but are not limited to:

**Odors During Receiving:**

- Mix materials upon receipt (increase material porosity).
- Stockpile bulking agent or high carbon amendments as receiving basin.
- Stockpile bulking agents or high carbon amendments for unexpected deliveries.
- Consider blanketing odiferous materials with a six-inch to one-foot layer of bulking agent, high carbon amendments, or finished compost (watered lightly to reduce odor releases).
- Reject odorous loads if possible (or add odor absorbing material at the originating location, such as sawdust to a load of manure).
- Aerate receiving floor.
- Incorporate wet or odorous loads directly into actively composting windrows.
- Expedite material processing from the time it is first delivered to the facility to the time it becomes saleable.

- Increase collection frequency.
- Consider blanketing odiferous materials with a six-inch to one-foot layer of bulking agent, high carbon amendments, or finished compost (watered lightly to reduce odor releases).

**Odors During Grinding:**

- Add light misting of water or odor neutralizer to grinder at discharge points.
- Consider grinding green materials with woodier materials.

**Odors During Mixing:**

- Create windrows/piles that are sufficiently blended.
- Combine materials to achieve a high carbon to nitrate ratio (greater than 30 to 1).
- Mist water or odor neutralizer at dust generation points.
- Create piles with good porosity.

**Odors During Composting:**

- Turn regularly to re-invigorate the composting process.
- Avoid over-watering windrows but maintain sufficient moisture.
- Make smaller windrows to increase passive aeration.
- Consider blanketing odiferous materials with a six-inch to one-foot layer of bulking agent, high carbon amendments, or finished compost (watered lightly to reduce odor releases).
- For hydrogen-sulfide and related odors, adopt forced aeration.

**Odors During Curing:**

- Decrease curing pile size (height).
- Increase processing time prior to moving to curing.
- Review moisture content of in-process compost.
- Screen after curing to maintain porosity.
- Aerate curing piles.

**Odors at the Site:**

- Clean aisles of spilled material (particularly at the end of each day).
- Mechanically sweep paved areas at the end of each shift.
- Apply water and/or neutralizer to reduce dust during dry conditions.

**Odors in Runoff Water and Leachate:**

- Review national pollutant discharge elimination system (NPDES) procedures to minimize storm water contact with organic materials.
- Remove particles from water draining into storm water retention basin.
- Filter storm water through a filter berm or sock.
- Use odor suppressants/neutralizers or masking agents in water trucks used for dust control, and/or in leachate collection tanks.

HAZ/mm-11

**Compost Operation – Monitoring.** The applicant shall incorporate a ‘compliance-based’ monitoring program during operation of the compost facility and include the following elements:

- a. **Prior to re-establishment of the Composting Operation**, a monitor shall be retained by the County (funded by the applicant) to provide oversight of the processing of greenwaste and wood waste material brought on-site for the life of the compost project.
- b. The monitor shall prepare a work plan that will include the following:
  - i. Inclusion of qualified monitoring staff that can provide expertise on reducing compost-related odors, and developing noise mitigation should the existing measures not be adequate;
  - ii. Creation of a complaint ‘hotline’ telephone service for use by the public and administered by the monitor; a prominent sign shall be posted by the applicant at the site’s entrance that includes this complaint hotline number, which shall be kept in good working order for the life of the project.
  - iii. A plan for timely and effective responses to complaints received between 6 a.m. and 10 p.m., including the location of the monitor and time to arrive on-site to be no more than one hour;
  - iv. A ‘compliance driven’ program, where initial monitoring efforts will be at key milestones (e.g., after installation of noise attenuation measures, etc.) and thereafter on a ‘periodic’ basis. As complaints are verified and/or non-compliance encountered, monitoring shall increase until compliance is achieved.
  - v. Random monitoring shall be an integral portion of the work plan, which shall include before and after approved hours of operation;
  - vi. As there are other permitting agencies (RWQCB, SLOAPCD, CalRecycle), the monitor shall coordinate with these agencies to notify them when there is a potential compliance issue within that agency’s jurisdiction;
  - vii. Where there is difficulty in achieving compliance, an adaptive management process shall be developed that includes the following approach:
    - Verify that the required measure is being implemented as intended;
    - Work with operator to refine the measure to achieve compliance;
    - Formulate and apply a different approach to achieve the intended measure.
  - viii. Regular neighborhood meetings shall be held by the County monitor and landfill operator, and attended by neighbors to listen to neighborhood concerns.

- ix. The County monitor will provide an ‘agency coordination’ function to 1) better address and direct complaints received, and 2) understand and develop a central or clearinghouse process with the intent to improve coordination with all other permitting agencies on operational requirements and regulatory framework for the compost facility.

HAZ/mm-12

**Compost Operation – Planning Commission Review. After the Compost Operation has been re-established,** staff will report back to the Planning Commission regarding the project’s compliance with conditions within one year. The report back shall be noticed as a public hearing. The applicant agrees that the Planning Commission will retain discretionary jurisdiction, and may place additional conditions on the project over this permit until the final 12 month report back hearing.

HAZ/mm-13

**Compost Operation – Alternative Approach.** If after implementation of mitigation measures HAZ/mm-9 through 12 the Planning Commission finds that odors from the CO remain significant, the applicant shall enclose the facility and/or implement an alternative composting technology, such as Anaerobic Digestion (AD).

*Residual Impact*

Since release of the 2009 Draft EIR, CalRecycle has received more than 700 odor complaints. These complaints were received during a period when the applicant was attempting to address odors through incorporation of measures similar to those recommended above. The applicant has not attempted to transition to aerated static piles, but this method of processing could reduce odors since the material is covered and would not need to be turned as often. However, given the history of complaints at the site and the relatively close proximity of neighbors to the CO, it is possible that odor complaints will continue at the Landfill as long as the CO is not enclosed.

If HAZ/mm-13 is implemented, the CO would need to be either enclosed completely or the applicant would need to convert to another technology, most likely AD. If AD technology is employed, methane, which is a component of the odors and created from the decomposition of waste, could be captured and burned, converted to energy, or piped to the Price Canyon oilfield, as is currently done with landfill gas from the disposal area. Nevertheless, the Draft Program EIR prepared by CalRecycle, for AD facilities notes that:

*“ . . . the collection transport, storage, and pre-processing activities of the potentially odiferous organic substrates for digestion and the resultant digestate could produce nuisance odors at AD facilities. In addition, the siting of these digester facilities could lead to objectionable odors at off-site receptors in the vicinity”* (CalRecycle, 2011).

It should be noted that there is a range of potential AD technologies, and if it becomes necessary to implement HAZ/mm-13, additional environmental review would likely be required. Because of these issues, odor impacts at this time would be considered *significant and unavoidable (Class I)*.

## 6. Cumulative Impacts

Cumulative development in San Luis Obispo County would result in the increased use and/or transport of household hazardous materials, including E-waste and U-waste, in the area and the potential exposure of an increased population to these materials. Increases in compost processing would also increase the potential for human health risks. These increases have been addressed under the previous sections.

Potential hazards and use of hazardous materials are generally location-specific to the extent that they may result in significant impacts on the localized environment, but they are not “cumulative” as is applicable to other issues (e.g., traffic, air quality, etc.).

Another potential odor source in the vicinity of the proposed project is the Price Canyon Oilfield, located approximately one mile west. An EIR prepared for the Price Canyon Oilfield (Padre, 2008) determined that odors from operation of the proposed water reclamation facility could be mitigated to a less than significant level. The oilfield is also known to produce odors, both from operation of the oilfield and naturally occurring odors associated with the petroleum deposits in the area. However there are no anticipated new odor sources in the area other than the proposed project. Cumulative impacts related to hazards and hazardous materials and odors would be *less than significant (Class III)*. No additional mitigation measures are required.