4.4 HAZARDS AND HAZARDOUS MATERIALS

Assessments of hazards and hazardous materials impacts associated with the Tajiguas Landfill have been addressed in the prior Environmental Documents prepared for the Tajiguas Landfill Project. A Hazards and Hazardous Materials Technical Study (URS, 2013) (see Appendix F) was also prepared to analyze impacts specifically associated with construction and operation of the Tajiguas Resource Recovery Project facilities. The analysis of hazards and hazardous materials contained in these Environmental Documents and the Hazards and Hazardous Materials Technical Study were used to assist in the section.

4.4.1 Setting

4.4.1.1 Overview

The Tajiguas Resource Recovery Project would be located at the Tajiguas Landfill, a Class III non-hazardous solid waste disposal facility located on the Gaviota coast, approximately 26 miles west of the City of Santa Barbara. The Gaviota coast is characterized by a series of moderately steep, east-west trending coastal canyons that drain southward from the Santa Ynez Mountains in the north, to the Pacific Ocean. The Tajiguas Landfill is located in one of these canyons, Cañada de la Pila. Most of the coastal canyons are separated from one another by relatively steep ridgelines, which provide a degree of isolation from fire or explosion hazards that might be present from the activities within the canyons. There are few residential areas along the Gaviota coast as a whole.

Areas adjacent to the Tajiguas Landfill consist of national forest, open space, and agricultural uses such as grazing land and avocado orchards. The coastal zone boundary crosses through the southern half of the Landfill property. The closest residential use to the project site is the Arroyo Quemada community located approximately 2,000 feet southeast of the landfill property. Most of the surrounding lands are used for agriculture (which includes as a permitted use, a single family dwelling) and several large parcels are within conservation easements. Other uses include state beaches, state parks, recreation areas and abandoned and active oil and gas facilities.

4.4.1.2 Landfill Setting

The landfill receives various waste streams for disposal including: residential and commercial waste collected by contracted and franchised haulers; waste from four County transfer stations; residuals from the commingled recyclables processed by Gold Coast in Ventura County; self-hauled waste; and other waste including dead animals, hard to handle materials and grit from wastewater treatment plants. The current landfill operations have a good safety record with very few Occupational Safety and Health Administration (OSHA) recordable incidents (Spier, 2013).

The County has continually operated the Tajiguas Landfill as a Class III solid waste landfill since 1967. Prior to operation as a landfill, land uses at the proposed facility sites were reportedly undeveloped and used for agricultural purposes. A Phase I Environmental Site Assessment that details the history of site operations and areas of historic hazardous materials use and storage has not been prepared for the specific area in the landfill that proposed facilities would be located. The MRF/AD Facility buildings are proposed within areas of reported clean fill. The parking area is partially over a portion of the landfill waste disposal area where a final cover has been placed by RRWMD. The composting area would overlie the landfill waste disposal area, which would receive a final cover system prior to the installation of the composting area pavement system. Therefore, large areas of soil contamination are not anticipated. Some localized areas on the operations deck may have been affected by landfill fueling activities and existing landfill hazardous materials storage.

4.4.1.3 Off-Site Sources of Hazardous Materials

Transportation Corridors

A major source of hazardous materials in the project area is commercial traffic along U.S. Highway 101, which is located about 1,600 feet south of the Tajiguas Landfill. The Union Pacific Railroad (UPRR) tracks also run parallel to the highway, just on its south side. U.S. Highway 101 and UPRR have many cargo carriers handling petroleum, petroleum products, and various industrial gases. These commodities and other potentially hazardous materials are legally allowed to be transported by motor or rail carrier by U.S. Department of Transportation and state transportation agencies.

Active Facilities

The Gaviota coast and its canyons have active oil and gas facilities which have inherent hazards including crude oil spills, toxic gases, and associated flammable gas. Active facilities include the Gaviota Oil Heating Facility (located 4.1 miles west of the landfill) and the Las Flores Canyon Oil and Gas Processing Facilities (located 4.6 miles east of the landfill). Similarly, there are crude and oil pipelines (All American) and gas pipelines (Southern California Gas) connecting these facilities to the marketplace. These pipelines pass by the entrance of the Tajiguas Landfill and are marked per state and federal requirements. These facilities have been subject to environmental review that included a hazardous materials review by the County of Santa Barbara and others.

Inactive Facilities

The Gaviota coast contains a number of historic facilities and closed facilities that are currently undergoing abandonment. This includes the former Shell Hercules Gas Plant located in Cañada de la Huerta, immediately west of the landfill site. This site once housed facilities for processing natural gas produced from subsea wells in the Molino Offshore field. The Department of Toxic Substances Control (DTSC) has designated the site a State Response Cleanup site due to soil and groundwater contamination from hydrocarbons, mercury, lead and polychlorinated biphenyls (PCB) at varying concentrations. The site is currently under remediation and does not pose an immediate environmental hazard to the proposed project. Future remediation efforts are being investigated by the current landowner Shell Oil, with significant oversight from a multiple agency task force.

4.4.1.4 Sources of Hazards and Hazardous Materials at the Tajiguas Landfill

Landfill Gas (LFG)

Landfill gas is currently produced at the Tajiguas Landfill during the anaerobic decomposition of organic waste materials in the buried MSW and has the potential to migrate through the soil. The volume of LFG generated is a function of the total volume of material in the waste prism. The LFG contains approximately 50 to 60 percent methane and is collected by gas extraction wells and a network of collection pipes and is routed to a main header system. LFG is processed in either an internal combustion engine for power production and/or a flare. This flare and engine are located within the landfill property, near the southern entrance of the landfill.

The LFG collection system is continuously monitored for gas quality and volume throughput at the engine/flare via instrumentation. If there are disruptions, the operators of the system are alarmed by either installed instrumentation or programmed callouts at the engine facility. This requires the operators to troubleshoot the collection system. The operations personnel notify the RRWMD staff at the landfill for information on the problem or increased awareness of the situation. Additional protection for the integrity of the LFG collection system is the monthly preventative maintenance performed by a technician to ensure proper flow balancing within the network of collection pipes. In addition, there is an active surface monitoring program by the RRWMD staff to assess LFG emissions from the surface above the waste footprint.

Hazardous Materials

Hazardous materials currently used and stored at the landfill include motor fuels (diesel and gasoline), oils and small quantities of household hazardous waste recovered from the MSW. Motor fuels are stored in three portable above-ground unpressurized tanks, including a 20,000 gallon red diesel (off-road) tank, 550 gallon diesel tank and 230 gallon gasoline tank. The fuels are used for off-road landfill equipment, and motor vehicles utilized by RRWMD staff for transportation (on-site and off-site). There have been no reported spills or releases from the tanks.

4.4.1.5 Wildfire Hazards

The Tajiguas Landfill is located within a high fire hazard severity zone designated by the California Department of Forestry and Fire Protection (CalFire). The surrounding areas are mapped as high and very high fire hazard severity zones by CalFire. The Gaviota Coast has a Mediterranean type climate in which hot summer droughts are followed by winter season rainfall. The hot, dry summers subject vegetation to prolonged periods of moisture stress at times when wildfire is most likely. In addition to the long, dry summers, the area is subject to “sundowner” type winds with speeds up to 50 MPH or more. These strong winds bring very warm, dry air onto the coastal plain, further removing moisture from vegetation and resulting in very high fire hazard conditions.

Recent regional fires affecting the area included the Gaviota Fire (2004), in which no damage to the landfill occurred. Vegetation on areas of the site not disturbed by ongoing operations consists primarily of uncultivated, flammable vegetation such as coastal sage scrub, chaparral and ruderal grasslands. There have been no recent reported incidents of fire on the landfill from off-site sources. However, occasional small fires resulting from reflective bird deterrents have occurred on the site. These small fires have been contained and extinguished immediately by landfill staff.

The existing top deck, which has not yet reached final fill elevations, and the proposed MRF/AD Facility site is, and would be, relatively barren and devoid of combustible materials. Many of the slopes are vegetated with coastal sage scrub species and annual grasses for erosion control.

Fire protection services in the vicinity of the Tajiguas Landfill are provided by the Santa Barbara County Fire Department (SBCFD). SBCFD Station #18 is located in Gaviota (approximately 5 miles west of the landfill), and could respond to a fire or other emergency associated with the proposed project within 9 minutes.

Although there are no formal County requirements for water storage for fire protection, the landfill reserves 17,000 gallons of water stored in one 10,000-gallon tank, and one 7,000-gallon tank for use in the event of a fire. Other fire suppression equipment such as fire extinguishers is provided in compliance with SBCFD and OSHA standards. Existing site improvements such as roads and the perimeter firebreak also provide protection from wildfires.

4.4.1.6 Regulatory Setting

The management of hazards, hazardous materials, hazardous waste, and public safety is subject to numerous laws and regulations at all levels of government. Regulations applicable to the proposed project are designed to regulate hazardous materials and hazardous wastes, as well as to manage sites contaminated by hazardous waste. These regulations are designed to limit the risk of upset during the use, transport, handling storage and disposal of hazardous materials. Summaries of federal and state laws and regulations related to hazards and hazardous materials management are presented in this section. Note that summaries of worker safety regulations are provided below, however; impacts related to worker safety are not addressed in this SEIR as impacts under CEQA are limited to public exposure.

Regulatory Definitions

The following hazardous materials and hazardous waste definitions provide a simplified overview of a very complicated subject; they are not legal definitions.

Hazardous Material. Any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. A number of properties may cause a substance to be considered hazardous, including toxicity, ignitibility, corrosivity, or reactivity.

Hazardous Waste. A waste or combination of waste which because of its quantity, concentration, or physical, chemical, or infection characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitation-reversible illness; or pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio-accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of or otherwise managed.

Federal Regulations

U.S. Environmental Protection Agency. The U.S. Environmental Protection Agency (EPA) is the principal regulatory agency responsible for the safe use and handling of hazardous materials.

Superfund Amendments and Reauthorization Act (SARA) Public Law 99-499 (100 Stats. 1613). SARA amended the Comprehensive Environmental Response, Compensation, and Liability Act (*CERCLA, 42 U.S.C. § 9601 et seq.*) on October 17, 1986. SARA specifically addresses the management of hazardous materials by requiring public disclosure of information relating to the types and quantities of hazardous materials used at various types of facilities. SARA Title III (*42 U.S.C. § 11001 et seq.*) is referred to as the Emergency Planning and Community Right to Know Act. The Act addresses community emergency planning, emergency release notification, and hazardous materials chemical inventory reporting.

Resource Conservation and Recovery Act (RCRA) 42 U.S.C. §6901 et seq. RCRA gave the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA regulates disposal of solid and hazardous waste, adopted by congress on October 21, 1976. Subtitle D of RCRA established the solid waste program, which encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste. RCRA encourages environmentally sound solid waste management practices that maximize the reuse of recoverable material and foster resource recovery.

Guidelines for Land Disposal of Solid Waste, 40 CFR, Part 241. This section delineates the minimum levels of performance required of any solid waste and disposal site. Features of this regulation include site selection consistent with public health, air and water quality standards, and determination of the waste that will be accepted by the facility. Provisions are included regarding control of surface water, leachate, dust, LFG, and prohibition of open burning. Application of daily cover material or approved alternative daily cover is required to minimize fire hazards, infiltration of precipitation, odors and blowing litter, to provide control of vectors and fugitive emissions of LFG, and to discourage scavenging. These guidelines also address protection of equipment, use of safety equipment, fire protection emergency communications, site access traffic control, and recordkeeping.

Clean Air Act of 1990, 42 U.S.C. 7401-7671. The Clean Air Act (CAA) as amended in 1990 also requires states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. It establishes a nationwide emergency planning and response program and imposes reporting requirements for business that store, handle, or produce significant quantities of extremely hazardous materials.

Clean Air Act Risk Management Plan, 42 USC § 112(r). This section of the CAA determines that facilities storing or handling significant amounts of acutely hazardous materials are required to prepare and submit a Risk Management Plan (RMP), codified under 40 CFR 68.

Occupational Safety and Health Act of 1970 (OSHA), 29 USC §651 et seq.; 29 CFR §§1910 et seq.; and 29 CFR §1926 et seq. OSHA establishes occupational safety and health standards (e.g., permissible exposure limits for toxic air contaminants, electrical protective equipment requirements, electrical workers safety standards, and the requirement that information concerning the hazards associated with the use of all chemicals is transmitted from employers to employees and safety and health regulations for construction. Subpart I of §1910 and Subpart E of §1926 address personal protective equipment. Section 1910.119 addresses Process Safety Management and management of highly hazardous chemicals and includes requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals.

Under the Operational Status Agreement of October 5, 1989, between the federal OSHA and the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA), the state resumed full enforcement responsibility for most of the relevant federal standards and regulations. Federal OSHA has retained concurrent enforcement jurisdiction with respect to certain federal standards, including standards relating to hazardous materials provided in 29 CFR §1910.120.

National Fire Protection Association. The National Fire Protection Association (NFPA) sets forth minimum standards to establish a reasonable level of fire safety and property protection from the hazards created by fire and explosion. The standards apply to the manufacture, testing, and maintenance of fire protection equipment. The NFPA also provides guidance on safe selection and design, installation, maintenance, and construction of electrical systems.

U.S. Department of Transportation. The U.S. Department of Transportation (DOT) has the regulatory responsibility for the safe transportation of hazardous materials.

State of California Regulations

California Emergency Management Agency. The California Emergency Management Agency Hazardous Materials (HazMat) Section coordinates statewide implementation of hazardous materials accident prevention and emergency response programs for all types of hazardous materials incidents and threats.

California Health and Safety Code § 25500. The California Health and Safety Code (CHSC), Section 25500, requires companies that handle hazardous materials in sufficient quantities to develop a Hazardous Materials Business Plan (HMBP). The HMBP includes basic information on the location, type, quantity, and health risks of hazardous materials handled, stored, used, or disposed of that could be accidentally released into the environment. Each plan includes training for new personnel, and annual training of all personnel in safety procedures to follow in the event of a release of hazardous materials. It also includes an emergency response plan and identifies the business representative able to assist emergency personnel in the event of a release.

California Department of Toxic Substance Control. The objective of the DTSC is to protect human health and the environment from exposure to hazardous material and waste. The DTSC has the authority to respond to and enforce the cleanup of hazardous substance releases. Waste streams at oil production sites are generally considered waste, not substances, and are thus regulated by the DTSC when hazardous. Certain waste streams can be considered as recyclable material, not waste, provided that their ultimate disposal to land does not release contaminants to the environment.

Central Coast Regional Water Quality Control Board (CCRWQCB). The CCRWQCB protects ground and surface water quality in Santa Barbara County by the development and enforcement of water quality objectives and implementation of the Water Quality Control Plan for Santa Barbara County. The CCRWQCB governs requirements; issues waste discharge permits, takes enforcement action against violators, and monitors water quality. Landfill design, construction, and maintenance are regulated by CCRWQCB to ensure the environmental safety of the facility both during its operation and upon its closure. In addition, the CCRWQCB prescribes proper drainage design practices to be used to prevent standing water and other areas conducive to vector habitats.

California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle is component of the California Environmental Protection Agency (Cal/EPA). CalRecycle is responsible for managing California's solid waste stream and protects public health and the environment by regulating waste management facilities. CalRecycle sets operations and design standards for solid waste facilities such as the Tajiguas Landfill, including composting facilities.

Aboveground Petroleum Storage Act. The Act is intended to ensure compliance with the federal CWA. The law applies if a facility has an aboveground storage tank (AST) with a capacity greater than 660 gallons or a combined AST capacity greater than 1,320 gallons and if there is a reasonable possibility that the tank(s) may discharge oil in "harmful quantities" into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare an SPCC Plan. The law does not cover AST design, engineering, construction, or other technical requirements, which are usually determined by local fire departments. Although there are no navigable waterways or shore lands near the project site, the project would store greater than 10,000 gallons of petroleum products onsite, and the facility will be required to prepare an SPCC plan.

Safe Drinking Water and Toxics Enforcement Act (Proposition 65). Proposition 65 requires the state to identify chemicals that cause cancer and reproductive toxicity, contains requirements for informing the public of the presence of these chemicals, and prohibits discharge of the chemicals into sources of drinking water. Lists of the chemicals of concern are published and updated periodically by California Office of Environmental Health Hazard Assessment (OEHHA).

California Fire Code, Article 80. This article includes provisions for storage and handling of hazardous materials. Considerable overlap exists between this Code and the California Health and Safety Code. However, the Fire Code contains independent provisions regarding fire protection and neutralization systems for emergency venting.

Title 8, California Code of Regulations. Title 8 prescribes general occupational safety and health regulations and standards in addition to the construction and industrial safety regulations, standards, and orders. Applicable sections of CCR Title 8, Chapter 4, Subchapters 7 and 24 will be complied with during construction and operation of the Proposed Project. Specifically, Title 8 CCR §1509 (Construction) and §3203 (General Industry) make numerous changes designed to redirect the emphasis of Cal-OSHA toward ensuring that employers have an effective work site Illness and Injury Prevention Plan, to focus Cal-OSHA discretionary inspections in the highest hazard industries as determined by workers' compensation and other occupational injury data, and to limit the number of follow-up inspections that Cal-OSHA must perform. Title 8, CCR §5189 requires facility owners to develop and implement effective Safety Management Plans to ensure that large quantities of hazardous materials are handled and managed safely.

Local Authorities and Administering Agencies

Certified Unified Program Agency (CUPA). The CUPA is an agency certified by the DTSC to conduct the Unified Program, which consists of hazardous waste generator and onsite treatment programs; aboveground and underground storage tank programs; Hazardous Materials Management, Business Plans, and Inventory Statements; and the Risk Management and Prevention Program. In the landfill area, the CUPA is the Santa Barbara County, Public Health Department Environmental Health Services Division (EHS). The EHS supervises the remediation of contaminated soil sites in Santa Barbara County. The EHS will grant closure of an impacted site when confirmatory samples of soil and groundwater taken demonstrate that levels of contaminants are below the standards set by DTSC and CCRWQCB.

Santa Barbara County Comprehensive Plan. The Plan provides guidance for issues of public health and safety within the County. The county reviews proposed projects for consistency with the Comprehensive Plan.

County Environmental Health Services Division. The Local Enforcement Agency (LEA) responsible for the monitoring of landfill regarding the performance standards in CCR, Title 27, including items associated with health and safety.

4.4.2 Impact Analysis and Mitigation Measures

4.4.2.1 Thresholds of Significance

The criteria for determining significant impacts related to hazards and hazardous materials were developed in accordance with Section 15065(a) and Appendix G of the State CEQA Guidelines and the Santa Barbara County Environmental Thresholds and Guidelines Manual (Santa Barbara County 1992, updated 2015 ~~2008~~).

CEQA Guidelines Appendix G

Implementation of the proposed project may have potentially significant adverse impacts if it would result in any of the following:

- Create a significant hazard to the public or the 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 0.25 mile of an existing or proposed 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, create a significant hazard to the public or environment.
- For a project located within an airport land use plan or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Santa Barbara County Environmental Thresholds and Guidelines Manual

Public safety thresholds contained in the County's Environmental Thresholds and Guidelines Manual focus on involuntary public exposure to acute risks that stem from certain types of activities with significant quantities of hazardous materials or land uses proposed in proximity to existing hazardous facilities. The County's public safety thresholds employ quantitative measures of societal risk of a proposed development to indicate whether the annual probability of expected fatalities or serious injuries is significant or not. The thresholds apply to risks from specific facilities, activities, and handling of specific hazardous materials. The proposed project does not include any of the facilities or activities, or handling of such hazardous materials identified in the applicability section of the County's public safety thresholds. Therefore, these thresholds are not applicable to this analysis. However, the concepts of risk to public safety (involuntary exposure) provided in the Manual are applied in this impact analysis.

4.4.2.2 Approved Tajiguas Landfill Expansion Project

01-EIR-05 prepared for the Tajiguas Landfill Expansion Project (see Section 3.12.3) identified the following public safety impacts:

1. Impacts to landfill personnel, equipment and structures associated with a wildland (off-site) fire were considered significant but mitigable (Class II). Mitigation Measure HS-1 was adopted to improve fire prevention and suppression practices.
2. Risk of fire associated with on-site storage of petroleum products was considered a significant but mitigable impact (Class II). Mitigation Measure HS-1 was adopted to improve fire prevention and suppression practices.

3. Impacts to landfill personnel, equipment and structures associated with a fire originating at the landfill were considered less than significant (Class III).

4. Risk of a subsurface fire at the landfill was considered a significant but mitigable impact (Class II). Mitigation Measure HS-1 was adopted to improve fire prevention and suppression practices.

5. The potential for unauthorized dumping of unacceptable wastes either during or after landfill normal operation hours was considered a significant but mitigable safety impact (Class II). Mitigation Measure HS-2 was adopted to improve site security practices.

6. Explosion or other incidents due to landfill gas emissions were considered a significant but mitigable safety impact (Class II). Continued implementation of the landfill gas collection and disposal system and implementation of Mitigation Measures HS-3 and HS-4 were identified to improve landfill gas monitoring and inspection for cracks in landfill cover materials.

7. The potential for workers becoming exposed to disease due to contact with rodents attracted to the waste was identified as a significant but mitigable safety impact (Class II). Mitigation measures adopted for nuisance impacts were considered adequate to reduce this potential health and safety impact.

8. Safety risks associated with heavy equipment use, elevated noise and dust inhalation was identified as a significant but mitigable safety impact (Class II). Existing safety procedures were determined to be adequate to mitigate this potential impact.

9. Workers access to and use of steep access roads and narrow switchbacks was considered to result in significant but mitigable safety impact (Class II). Mitigation Measure HS-5 was adopted to improve on-site traffic control.

4.4.2.3 Approved Tajiguas Landfill Reconfiguration and Baron Ranch Restoration Project

Landfill reconfiguration was determined to have no effect on proposed landfill operations, the amount of waste handled, the permitted waste disposal capacity, or result in any increase in health hazards previously disclosed in 01-EIR-05 or create any new health hazards.

4.4.2.4 Proposed Tajiguas Resource Recovery Project

Impact TRRP HAZ-1: Construction activities associated with the proposed project may result in an adverse but less than significant inadvertent discharge of small quantities of hazardous materials – Class III Impact.

During construction, small quantities of hazardous materials (i.e., fuel, lubricating oils, hydraulic fluid, engine coolant) would be used at the landfill site and transported to and from the site. Small quantities of these substances could be accidentally released and result in soil contamination. However, hazardous materials handling procedures and worker safety procedures would be implemented as required by applicable regulations, and RRWMD landfill contractor requirements. Due to the small amounts of hazardous materials used during construction activities and the implementation of applicable regulations, potential impacts associated with use of hazardous materials for project construction purposes would be less than significant.

Impact TRRP HAZ-2: Use or storage of hazardous materials associated with project operations would not significantly affect the public or the environment – Class III Impact.

Small quantities of hazardous materials would be used at the proposed facilities, including diesel fuel, propane and sulfuric acid. The project operator would be required to maintain a HMBP with the CUPA, for the use and storage of hazardous materials. The HMBP would meet Emergency Planning and Right to Know Act requirements and would require the reporting of hazardous materials over regulatory thresholds. The HMBP would outline emergency response procedures and on-site equipment as well as training requirements. The final design of the proposed 10,000 gallon diesel fuel tank, and siting of this tank and the three existing fuel tanks to be relocated ~~diesel fuel tanks (four tanks having a total capacity of 37,500 gallons)~~ would be in accordance with the Uniform Fire Code, ensuring proper spatial separation with other fuel and ignition sources. Overall, impacts associated with operational hazardous materials use and storage would be less than significant.

Impact TRRP HAZ-3: Operation of the AD Facility could result in an accidental release of bio-gas which could result in an adverse but less than significant increase in the risk of fire or explosion – Class III Impact.

Bio-gas generated in the anaerobic digesters consists of methane and carbon dioxide, with small amounts of H_2S and ammonia. Methane is not toxic, but is classified as a simple asphyxiate. Bio-gas itself is not flammable and will not burn unless oxygen is present within a specific range of concentrations. The methane in bio-gas is flammable when mixed with air in concentrations of 5 to 15 percent. Above or below these concentrations methane is not flammable. In open spaces, bio-gas readily mixes with air, reducing its potential to reach flammable concentrations.

Operation of the AD Facility could increase the risk of fire and explosion hazards due to the potential accidental release and ignition of bio-gas. A review of the generation, handling and processing of bio-gas at the proposed AD Facility was conducted, with a focus of identifying events where an oxygen-methane mixture could occur within flammability limits. This could occur when digesters are opened to add organic waste or remove digestate. It is anticipated that about 208 purging cycles would occur per year when the AD Facility is at capacity. Each digester would be purged with exhaust gas from the CHP engines prior to opening, with the resulting gas combusted in a flare. Therefore, bio-gas would not be released when the digesters are opened.

The MRF and AD Facility would be equipped with methane monitors and alarms that would identify methane buildup and potentially flammable conditions. This equipment would provide early detection of flammable conditions and allow quicker response. The AD Facility would have a detailed loading and processing schedule of the individual digesters to prevent the mixing of oxygen and methane within flammability limits. A logic controller would be programmed to carefully control the gas (fuel and oxygen) ratios and enable proper purging of the digesters.

A worst-case explosion risk analysis (based on U.S. EPA requirements) was conducted assuming the failure of control and monitoring systems, and release of bio-gas forming a vapor cloud containing 427 pounds of methane. Assuming hypothetical ignition (e.g., from a very hot material or welding/cutting activity) and calm atmospheric conditions for dispersion, the methane would ignite very quickly and produce a flash flame. The rapid combustion would result in an expansion of the ignited gases and subsequently produce a pressure wave (referred to as overpressure). Typically, a regulatory agency acceptable level of concern for this hazard is an overpressure of 1 pound per square inch (psi) in the atmosphere, which can lead to broken glass and debris (EPA, 1999). The 1 psi overpressure hazard zone would be approximately 400 feet downwind (in a circular radius) of the AD Facility, which would be entirely contained within the landfill property (see Figure 4.4-1). The probability of a bio-gas explosion is anticipated to be low, and contingent on multiple failures/errors of equipment and operating procedures. Since the explosion footprint would not affect areas beyond the landfill property, and would therefore not affect the general public, and the probability of multiple failures/errors of equipment is low, this impact is considered less than significant.

Impact TRRP HAZ-4: With implementation of the proposed landfill gas (LFG) barrier and monitoring system and the existing LFG collection system there is a less than significant potential for LFG to collect within the MRF and/or AD Facility and reach flammable concentrations – Class III Impact.

LFG produced in landfill buried waste may migrate from the disposal areas and collect in enclosed structures, resulting in risk of fire/explosion. Project facilities constructed on top of areas where waste has been deposited would be limited to the MRF/AD Facility parking lots (see Figure 3-5), and the composting area which do not include enclosed/habitable structures. The MRF and AD Facility would be located near the waste footprint, but pursuant to California Code of Regulations Title 27 requirements they would be constructed with an impermeable membrane and equipped with LFG monitors and alarms that would identify LFG buildup and flammable/explosive conditions.

In addition, the existing LFG collection system would substantially reduce the potential for LFG migration into the proposed facilities. Monthly maintenance of the LFG collection wells is conducted and documented by the LFG collection system operator to ensure the integrity of the entire system (i.e., proper distribution of flow and minimizing leakage). Overall, the potential impact associated with LFG migration into project facilities is considered less than significant.

Impact TRRP HAZ-5: Hazardous materials may be encountered during construction and released to the environment – Class II Impact.

The landfill site is not a hazardous materials site identified pursuant to Government Code Section 65962.5. The MRF, AD Facility and relocated landfill maintenance facility would be located in areas constructed of engineered fill composed of clean native soil placed by landfill operations, and the composting area would be constructed on top of the closed landfill. In general, the potential for encountering hazardous materials during construction of the Tajiguas Resource Recovery Project facilities is expected to be low because of the history of use of those areas. However, localized soil contamination from spills or leaks may be present in areas where hazardous materials may have been or are currently used or stored as a part of existing landfill operations (e.g., fuel tanks, hazardous material storage areas, etc.). Construction activities could encounter contaminated soils and potentially expose construction personnel, the public, or the environment to hazardous materials. Contaminated soil could also require disposal as a hazardous waste. Impacts associated with exposure of hazardous materials are considered a potentially significant impact.

Mitigation Measures:

MM TRRP HAZ-1: Hazardous Materials Assessment and Remediation. Prior to earth disturbing activities, a preliminary assessment of areas within the project footprint where historical hazardous materials use occurred shall be conducted to identify the potential presence of contaminated soil. If contaminated soil is identified, additional assessment including collection of soil samples and a work plan to determine the lateral and vertical extent of impacts shall be prepared. If the results of the soil assessment identify contaminants that exceed threshold levels, affected soils shall be remediated to the satisfaction of the Santa Barbara County, Public Health Department Environmental Health Services Division (EHS), Site Mitigation Unit (SMU). Screening levels for environmental media such as soil, groundwater and soil vapor have been published by the U.S. Environmental Protection Agencies (known as Regional Screening Levels or RSLs) and California EPA (known as Environmental Screening Levels or ESLs). These screening levels will be used as threshold levels for determining the need for soil remediation. If multiple chemicals of concern are detected the published screening levels will be adjusted as appropriate to account for potential cumulative health effects. The final remediation goal may be the RSL, ESL or alternative goals that may be based on potential cumulative health effects and/or site-specific conditions.

A Soil Management Plan shall be developed and implemented, to provide guidance for the proper identification, handling, on-site management, and disposal of contaminated soil that may be encountered during construction activities. Depending on the type and extent of impacted material, remediation may include excavation and offsite disposal, onsite aeration, on or offsite treatment and backfilling. The EHS will grant closure of an impacted site when confirmatory samples of soil taken demonstrate that levels of contaminants are below the standards described above.

Plan Requirements and Timing: These measures shall be included in the project's plans and specifications, and implemented prior to ground disturbance. If contamination is observed, prior to initiating work on the soil management plan, the site shall be enrolled in the Voluntary Remedial Oversight Program per California H&S Code Section 101480 et seq.

Monitoring: RRWMD shall ensure these measures are implemented and review the results of the preliminary assessment, the work plan and Soil Management Plan. If contaminated soil is identified, RRWMD shall verify that soil remediation is completed as per EHS requirements.

Residual Impacts: Implementation of ***MM TRRP HAZ-1*** would reduce impacts associated with exposure of hazardous materials during construction to a less than significant level.

Impact TRRP HAZ-6: The proposed project would not significantly interfere with emergency response and evacuation of the landfill site – Class III Impact.

Emergency response and evacuation procedures for the project area are coordinated by the Santa Barbara County Sheriff's Department and the SBCFD. The proposed project would involve changes to the landfill site, including modest increases in employees, automobile traffic, and truck trips. In addition, the proposed project includes construction of new buildings, new industrial processes (MRF/AD Facility), and changes to the existing landfill procedures. Emergency access to and in the vicinity of the project site could potentially be affected during construction activities. However, a traffic control plan would be prepared to provide access for emergency vehicles during the construction period. During construction and operation activities of the proposed project, the SBCFD would require that adequate vehicular access be provided and maintained. Therefore, the proposed project would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Impact TRRP HAZ-7: The project would increase site structural development, introduce new fuel sources, new ignition sources and increase the number of personnel at the landfill site in a high fire hazard area, which could significantly increase fire risk – Class II Impact.

The proposed project has the potential to increase fire hazards by increasing the amount of structural development requiring fire protection, increasing the number of employees present on-site, introducing new fuel sources (bio-gas, propane tank, diesel tanks) and ignition sources (flare, sorting equipment, mobile equipment, composting operations, and hot loads [smoldering materials in waste delivery trucks]). In addition, fires originating in vegetation off-site may threaten project facilities.

The SBCFD provides fire protection services to the existing landfill site within an approximate response time of 9 minutes. Existing fire protection resources at the landfill include 17,000 gallons of water stored in one 10,000-gallon tank and one 7,000-gallon tank. An existing fire break is present around the perimeter of the landfill and large areas of the landfill have low biomass present due to the ongoing waste disposal activities which help to reduce the potential for wildland fires.

A 220,000-gallon gravity-fed water tank would be provided to serve the project's potable and fire water needs (see Figure 3-4). A dedicated fire protection water distribution system would convey the fire flow to the site fire hydrants and to the building sprinkler systems. The design would include a 360 degree fire vehicle access driveway with fire hydrants around the AD Facility and MRF buildings. Flammable storage tanks (i.e., diesel and propane) would be located away from the proposed buildings and according to applicable fire codes. The buildings would have a fire buffer zone including paved areas and irrigated vegetation. However, considering the large amount of additional structural development, the increase in onsite population, the increase in possible ignition sources, and given the presence of the proposed facilities in a high fire hazard area, operation of the Tajiguas Resource Recovery Project could result in a potentially significant fire hazard impact.

Mitigation Measures:

MM TRRP HAZ-2: Fire Protection and Prevention Plan. To reduce potential fire hazards, a Fire Protection and Prevention Plan shall be prepared prior to operation of the proposed project. The Plan shall identify fire hazards, describe facility operations, procedures to prevent ignition of fires, include regular inspection of fire suppression systems, and provide for worker training in safety procedures as well as protocols for responding to fire incidents. In addition, the Plan shall identify firefighting equipment and systems at the landfill and methods to safely store flammable and combustible materials. Fire protection equipment shall be installed and maintained in accordance with all applicable NFPA standards and recommendations. Fire reporting protocols (based on the size of the fire) and investigation protocols shall be detailed in the Plan.

The Fire Protection and Prevention Plan shall include the following information (as a minimum):

- Names and/or job titles responsible for maintaining equipment and monitoring flammable or combustible materials.
- Procedures to be followed in the event of fire.
- Fire alarms and fire protection equipment and facilities.
- System and equipment maintenance.
- Monthly and annual inspections.
- Firefighting demonstrations.
- Housekeeping practices.
- Training.

Plan Requirements and Timing: The plan shall be submitted to the County Fire Department and ~~LEA~~ County EHS for review and approval, and implemented prior to operation of project facilities.

Monitoring: RRWMD, ~~LEA~~ County EHS and the County Fire Department shall monitor and inspect the facility operations to ensure compliance with the Fire Protection and Prevention Plan.

Residual Impacts: Implementation of ***MM TRRP HAZ-2*** would reduce fire risk impacts to a less than significant level.

Relocated Landfill Facilities

Operations facilities (primarily portable offices) may be temporarily relocated during the project construction period to an area north of the landfill top deck or to the southern portion of the landfill. Landfill equipment maintenance facilities would be relocated to the area north of the landfill top deck (see Figure 3-4). No excavation would be required for relocated operations facilities, such that discovery of contaminated soils is not anticipated. Construction of the building pad for the relocated maintenance facilities could encounter contaminated soils as discussed in Impact TRRP HAZ-5. Overall, the relocation of landfill facilities would not result in any additional hazards or hazardous materials impacts. These facilities are part of the historic operation of the landfill and addressed in the Landfill Environmental Documents. Use of the facilities would be consistent with their current use.

4.4.2.5 Proposed Tajiguas Resource Recovery Project with Optional Comingled Source Separated Recyclables (CSSR) Component

The optional CSSR element would add an additional 10,000 square feet of sorting facilities to the proposed MRF building (see Figure 3-8). Additionally, the number of employees on the site would increase by 20 during the day and there would be additional deliveries of recyclable materials and transport of sorted materials off-site after processing. These activities would occur within the same project footprint, with no increase in habitable structures, use or storage of hazardous materials, bio-gas generation or handling, fuel sources, or ignition sources. The additional 20 on-site persons and associated vehicle traffic would not substantially increase the fire risk or adversely affect emergency response or evacuation. Overall, implementation of the optional CSSR element would not alter the significance level of these impacts as identified in Section 4.4.2.4 above.

4.4.2.6 Extension of Landfill Life Impacts

Impact TRRP HAZ-8: Project-related extension of the life of the Tajiguas Landfill would extend landfill-related hazards (e.g., storage and use of hazardous materials, subsurface landfill fire, risk of fire due to petroleum product storage and unauthorized dumping) further in time – Class II Impact.

Under the proposed project, small quantities of hazardous waste may continue to enter the site as a part of the MSW. Screening processes that currently occur at the scale house would continue and screening processes that currently occur at the landfill working face would now occur in MRF. Due to the project-related increase in diversion of MSW, the active life of the landfill would be extended approximately 10 years. The current use of hazardous materials and infrequent generation of hazardous waste (oil waste, oily debris, batteries, etc.) at the landfill would continue at rates equal or less than current operations. These activities have not resulted in significant hazards in the past and are not expected to increase due the extension of landfill life.

The landfill would receive the same overall volume of waste and the generation of the LFG would continue, as the waste currently disposed of in the landfill continues to degrade. However, waste entering the landfill after implementation of the proposed project would have greatly reduced organic fraction which would, over the long term, generate less LFG. Federal and State LFG regulations would continue to apply to landfill operations and the LFG collection system would continue to operate (collect and control LFG). However, hazards associated with operation of the landfill (see Section 4.4.2.2) would continue further in time as compared to earlier closure of landfill in the absence of the proposed project. Compliance with Federal and State hazardous materials regulations, Title 27 regulations and mitigation measures identified for the Tajiguas Landfill Expansion Project (fire prevention and suppression, improved site security, landfill gas monitoring, on-site traffic control) would continue to be implemented to avoid or offset significant impacts associated with hazards and hazardous materials.

4.4.2.7 Decommissioning Impacts

Impact TRRP HAZ-9: Decommissioning activities may expose contaminated soils and/or result in discharges of small quantities of hazardous materials – Class III Impact.

In compliance with existing hazardous materials and waste management regulations, measures would be in place to minimize the potential for spillage, mis-handling or improper storage of solid waste, recyclables and hazardous materials over the life of the project. Therefore, the potential for project-related substantial soil contamination at the project site would be low. Decommissioning activities would result in minimal excavation because paving and building pads would remain in place. The diesel fuel tank serving the MRF would be removed; however, this tank would be located above-ground such excavation is not required. Secondary spill containment proposed would prevent soil contamination associated with use of the fuel tank. Due to the low probability of substantial soil contamination and limited proposed ground disturbance, the potential for public exposure to hazardous materials is considered a less than significant impact.

Similar to project construction activities (see **Impact TRRP HAZ-1**), the use of heavy equipment and vehicles to dismantle and remove project facilities could result in spillage of fuel, coolant and other hydrocarbons. However, the intensity and total amount of decommissioning activity would be less than associated with construction. Therefore, the health hazard associated with discharge of hazardous materials during decommissioning is considered a less than significant impact.

4.4.2.8 Cumulative Impacts of the Tajiguas Resource Recovery Project

The only cumulative projects that have the potential to result in risk of upset impacts are the Shell Hercules Remediation Project and the SoCal Gas Storage Enhancement Project. The Shell Hercules Remediation Project is located immediately west of the landfill site and access to U.S. Highway 101 is shared with the landfill. Risks at the Shell Hercules site are related to exposure to, or release of, PCB-contaminated during soil excavation and subsequent removal and transportation of the soil. This hazard risk is not shared with the project and would not be additive in nature. The SoCal Gas Storage Enhancement Project is located 20 miles west of the landfill site and due to the distance, is not expected to contribute to cumulative risk of upset impacts in the vicinity of the landfill site. Due to the spatial separation of the sites and the nature of risks at each of the projects, cumulative risk of upset impacts are not expected. As described below, the proposed project may incrementally contribute to cumulative hazardous materials and fire hazard impacts when considered with other planned projects in the region (see Section 3.6).

Impact TRRP HAZ-CUM-1: Hazardous materials use, storage and disposal associated with the project combined with the cumulative projects would contribute to potentially significant hazards – Class II Cumulative Impact; Project Contribution - Not Considerable with Mitigation (Class II).

Many of the cumulative projects would involve the transportation, use and disposal of hazardous materials, primarily associated with fuel for construction equipment. However, contaminated soils may be transported as a result of the Gaviota Marine Terminal Demolition and Shell Hercules projects. These materials would be handled according to State law, such that the potential for cumulative public exposure is considered less than significant and the incremental contribution of the project with implementation of Mitigation Measure ***MM TRRP HAZ-1*** would not be considerable.

Impact TRRP HAZ-CUM-2: The project combined with the cumulative projects could contribute to a significant increase in fire hazard in the region – Class II Cumulative Impact; Project Contribution - Not Considerable with Mitigation (Class II).

Most of the cumulative projects are located in a high fire hazard area which has been subject to wildfires in the past. These cumulative projects would increase the amount of structural development, increase potential ignition sources, and increase the number of persons exposed to fire hazard. However, these projects (including the proposed project) would be required to comply with local fire prevention requirements of the SBCFD which generally include adequate water supply and pressure for firefighting, adequate access for fire equipment, and reduction of flammable vegetation in proximity to structural development.

The Tajiguas Landfill currently implements fire prevention measures (provision of water for firefighting, vegetation management, fire breaks, etc.) and the Tajiguas Resource Recovery Project would include additional measures (fire water storage, fire hydrants, building sprinkler systems, vegetation management, etc.) and in addition would be required to prepare and implement a Fire Protection and Prevention Plan. The cumulative fire risk impact is considered less than significant with compliance with SBCFD requirements and project specific CEQA mitigation requirements, and the incremental contribution of the project would be less than considerable with implementation of the proposed fire prevention facilities and development of a Fire Protection and Prevention Plan (***MM TRRP HAZ-2***).

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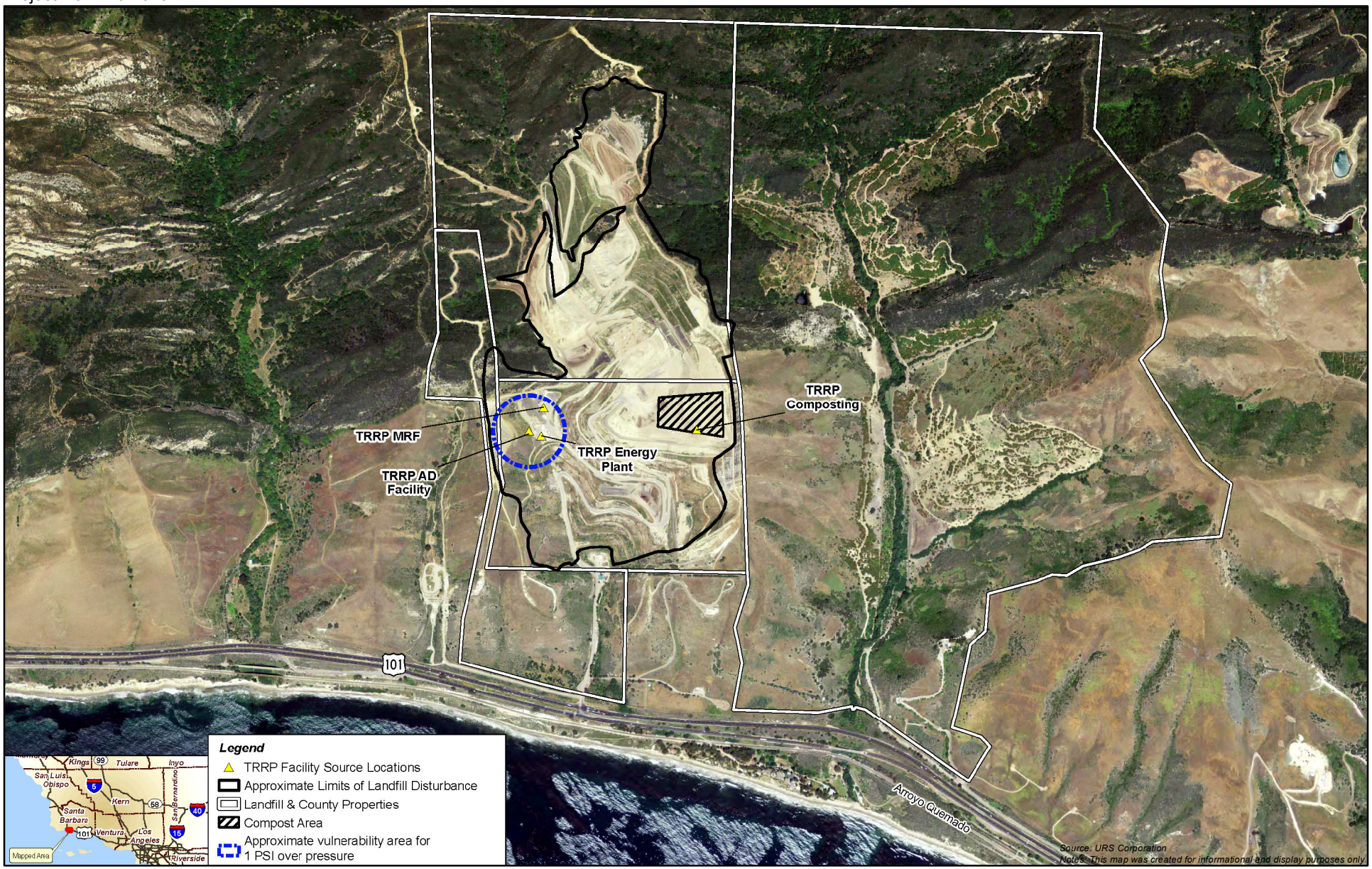

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ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

Tajiguas Resource Recovery Project

BIO-GAS EXPLOSION HAZARD AREA MAP
FIGURE 4.4-1

Back of Figure 4.4-1