

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).

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

16 4.4.1.3 Off-Site Sources of Hazardous Materials

17 **Transportation Corridors**

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

26 **Active Facilities**

27 The Gaviota coast and its canyons have active oil and gas facilities which have
28 inherent hazards including crude oil spills, toxic gases, and associated
29 flammable gas. Active facilities include the Gaviota Oil Heating Facility (located
30 4.1 miles west of the landfill) and the Las Flores Canyon Oil and Gas
31 Processing Facilities (located 4.6 miles east of the landfill). Similarly, there are
32 crude and oil pipelines (All American) and gas pipelines (Southern California
33 Gas) connecting these facilities to the marketplace. These pipelines pass by
34 the entrance of the Tajiguas Landfill and are marked per state and federal
35 requirements. These facilities have been subject to environmental review that
36 included a hazardous materials review by the County of Santa Barbara and
37 others.

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

14 4.4.1.4 Sources of Hazards and Hazardous Materials at the Tajiguas Landfill

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

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

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1 **Hazardous Materials**

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

10 4.4.1.5 Wildfire Hazards

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

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

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

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

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

7 4.4.1.6 Regulatory Setting

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

19 **Regulatory Definitions**

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

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

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

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1 **Federal Regulations**

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

5 Superfund Amendments and Reauthorization Act (SARA) Public Law 99-499
6 (100 Stats. 1613). SARA amended the Comprehensive Environmental
7 Response, Compensation, and Liability Act (*CERCLA*, 42 U.S.C. § 9601 *et*
8 *seq.*) on October 17, 1986. SARA specifically addresses the management of
9 hazardous materials by requiring public disclosure of information relating to the
10 types and quantities of hazardous materials used at various types of facilities.
11 SARA Title III (42 U.S.C. § 11001 *et seq.*) is referred to as the Emergency
12 Planning and Community Right to Know Act. The Act addresses community
13 emergency planning, emergency release notification, and hazardous materials
14 chemical inventory reporting.

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

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

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

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

12 Occupational Safety and Health Act of 1970 (OSHA), 29 USC §651 et seq.; 29
13 CFR §§1910 et seq.; and 29 CFR §1926 et seq. OSHA establishes
14 occupational safety and health standards (e.g., permissible exposure limits for
15 toxic air contaminants, electrical protective equipment requirements, electrical
16 workers safety standards, and the requirement that information concerning the
17 hazards associated with the use of all chemicals is transmitted from employers
18 to employees and safety and health regulations for construction. Subpart I of
19 §1910 and Subpart E of §1926 address personal protective equipment. Section
20 1910.119 addresses Process Safety Management and management of highly
21 hazardous chemicals and includes requirements for preventing or minimizing
22 the consequences of catastrophic releases of toxic, reactive, flammable, or
23 explosive chemicals.

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

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

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

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1 **State of California Regulations**

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

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

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

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

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

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

13 Safe Drinking Water and Toxics Enforcement Act (Proposition 65). Proposition
14 65 requires the state to identify chemicals that cause cancer and reproductive
15 toxicity, contains requirements for informing the public of the presence of these
16 chemicals, and prohibits discharge of the chemicals into sources of drinking
17 water. Lists of the chemicals of concern are published and updated periodically
18 by California Office of Environmental Health Hazard Assessment (OEHHA).

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

24 Title 8, California Code of Regulations. Title 8 prescribes general occupational
25 safety and health regulations and standards in addition to the construction and
26 industrial safety regulations, standards, and orders. Applicable sections of
27 CCR Title 8, Chapter 4, Subchapters 7 and 24 will be complied with during
28 construction and operation of the Proposed Project. Specifically, Title 8 CCR
29 §1509 (Construction) and §3203 (General Industry) make numerous changes
30 designed to redirect the emphasis of Cal-OSHA toward ensuring that employers
31 have an effective work site Illness and Injury Prevention Plan, to focus Cal-
32 OSHA discretionary inspections in the highest hazard industries as determined
33 by workers’ compensation and other occupational injury data, and to limit the
34 number of follow-up inspections that Cal-OSHA must perform. Title 8, CCR
35 §5189 requires facility owners to develop and implement effective Safety
36 Management Plans to ensure that large quantities of hazardous materials are
37 handled and managed safely.

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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.

- 1 • Be located on a site which is included on a list of hazardous materials
2 sites compiled pursuant to Government Code Section 65962.5, and as a
3 result, create a significant hazard to the public or environment.
- 4 • For a project located within an airport land use plan or where such a plan
5 has not been adopted, within 2 miles of a public airport or public use
6 airport, result in safety hazard for people residing or working in the
7 project area.
- 8 • For a project within the vicinity of a private airstrip, result in a safety
9 hazard for people residing or working in the project area.
- 10 • Impair implementation of or physically interfere with an adopted
11 emergency response plan or emergency evacuation plan.
- 12 • Expose people or structures to a significant risk of loss, injury or death
13 involving wildland fires, including where wildlands are adjacent to
14 urbanized areas or where residences are intermixed with wildlands.

15 **Santa Barbara County Environmental Thresholds and Guidelines Manual**

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

30 4.4.2.2 Approved Tajiguas Landfill Expansion Project

31 01-EIR-05 prepared for the Tajiguas Landfill Expansion Project (see Section
32 3.12.3) identified the following public safety impacts:

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

- 1 3. Impacts to landfill personnel, equipment and structures associated with
2 a fire originating at the landfill were considered less than significant
3 (Class III).
- 4 4. Risk of a subsurface fire at the landfill was considered a significant but
5 mitigable impact (Class II). Mitigation Measure HS-1 was adopted to
6 improve fire prevention and suppression practices.
- 7 5. The potential for unauthorized dumping of unacceptable wastes either
8 during or after landfill normal operation hours was considered a
9 significant but mitigable safety impact (Class II). Mitigation Measure
10 HS-2 was adopted to improve site security practices.
- 11 6. Explosion or other incidents due to landfill gas emissions were
12 considered a significant but mitigable safety impact (Class II).
13 Continued implementation of the landfill gas collection and disposal
14 system and implementation of Mitigation Measures HS-3 and HS-4 were
15 identified to improve landfill gas monitoring and inspection for cracks in
16 landfill cover materials.
- 17 7. The potential for workers becoming exposed to disease due to contact
18 with rodents attracted to the waste was identified as a significant but
19 mitigable safety impact (Class II). Mitigation measures adopted for
20 nuisance impacts were considered adequate to reduce this potential
21 health and safety impact.
- 22 8. Safety risks associated with heavy equipment use, elevated noise and
23 dust inhalation was identified as a significant but mitigable safety impact
24 (Class II). Existing safety procedures were determined to be adequate
25 to mitigate this potential impact.
- 26 9. Workers access to and use of steep access roads and narrow
27 switchbacks was considered to result in significant but mitigable safety
28 impact (Class II). Mitigation Measure HS-5 was adopted to improve on-
29 site traffic control.

30 4.4.2.3 Approved Tajiguas Landfill Reconfiguration and Baron Ranch Restoration
31 Project

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

36

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 H₂S 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.

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

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

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

37

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

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

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

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

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

1 **Mitigation Measures:**

2 **MM TRRP HAZ-1: Hazardous Materials Assessment and Remediation.**

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

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

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

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

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

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

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

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

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

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

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

14 ***Mitigation Measures:***

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

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

- 28 • Names and/or job titles responsible for maintaining equipment and
29 monitoring flammable or combustible materials.
- 30 • Procedures to be followed in the event of fire.
- 31 • Fire alarms and fire protection equipment and facilities.
- 32 • System and equipment maintenance.
- 33 • Monthly and annual inspections.
- 34 • Firefighting demonstrations.
- 35 • Housekeeping practices.
- 36 • Training.

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

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

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

6 **Relocated Landfill Facilities**

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

19 4.4.2.5 Proposed Tajiguas Resource Recovery Project with Optional Comingled
20 Source Separated Recyclables (CSSR) Component

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

33

1 4.4.2.6 Extension of Landfill Life Impacts

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

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

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

1 4.4.2.7 Decommissioning Impacts

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

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

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

25 4.4.2.8 Cumulative Impacts of the Tajiguas Resource Recovery Project

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

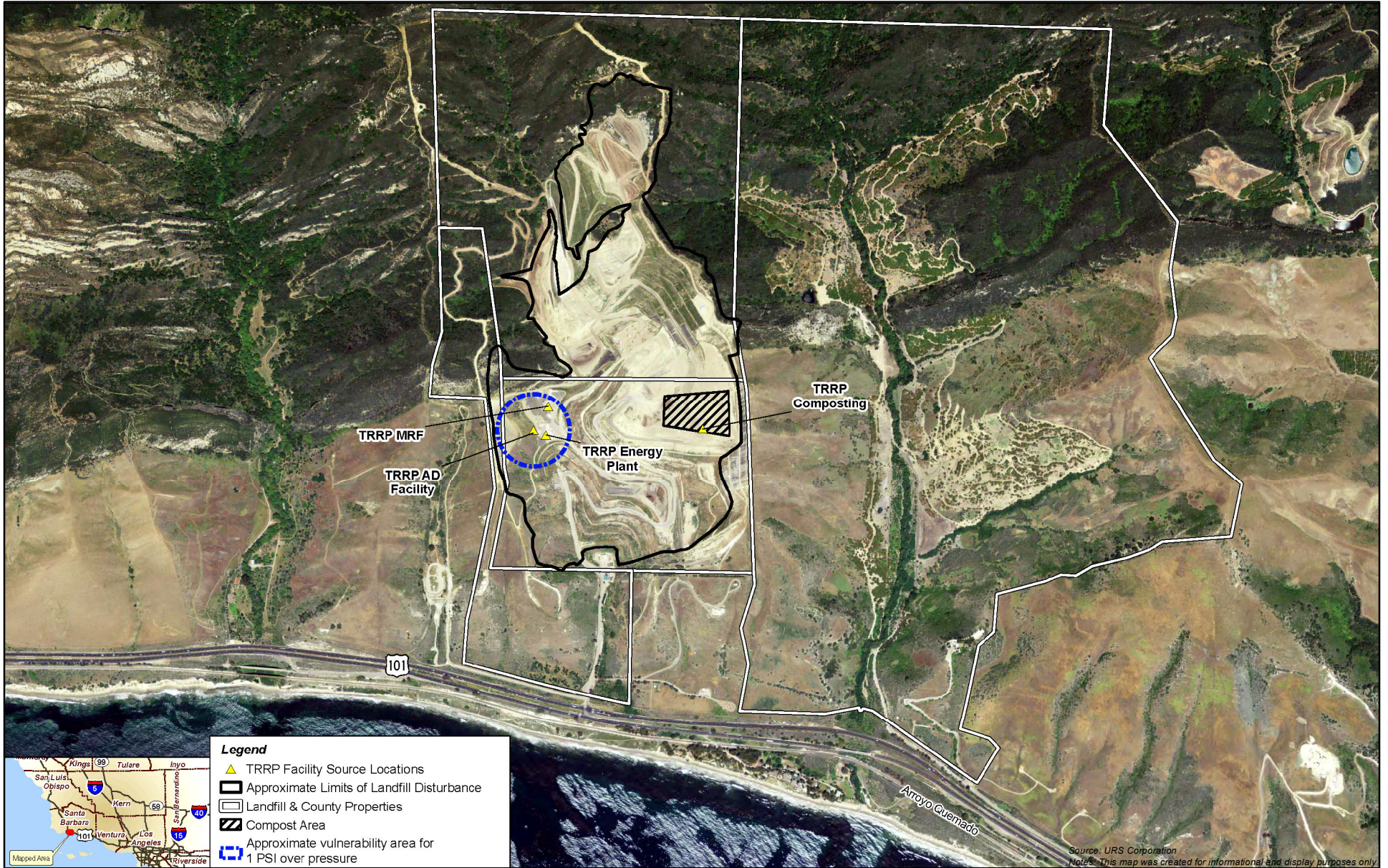
1 **Impact TRRP HAZ-CUM-1: Hazardous materials use, storage and disposal**
2 **associated with the project combined with the cumulative projects would**
3 **contribute to potentially significant hazards – Class II Cumulative Impact;**
4 **Project Contribution - Not Considerable with Mitigation (Class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

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

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

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

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



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Back of Figure 4.4-1