3.12 SOLID AND HAZARDOUS MATERIALS AND HAZARDS

This section describes the existing physical and regulatory setting for solid and hazardous materials and hazards and discusses effects of the EIS Alternatives on this resource area. Hazardous material exposure and solid waste generation and disposal are evaluated in this section. Exposure to hazardous air emissions of toxic air contaminants[1] is addressed in Section 3.2, "Air Quality." Other safety hazards, such as earthquakes, are addressed in Section 3.6, "Geology, Soils, and Paleontological Resources." Flooding hazards are addressed in Section 3.5, "Floodplains, Wetlands, and Coastal Management," and Section 3.8, "Hydrology and Water Quality." Emergency operations and access issues are addressed in Section 3.3, "Community Services."

3.12.1 Affected Environment

This section describes solid waste services, hazardous materials, and public safety conditions in the immediate vicinity of the existing SFVAMC Fort Miley Campus and in the Mission Bay area. Other public services, including law enforcement, fire protection, and parks/recreation, are discussed in Section 3.3.

Solid Waste

Recology, a private company, is San Francisco's authorized solid waste collection company and serves both residences and businesses. After solid waste is sorted and recycled (i.e., diverted), the waste that is not diverted is transferred to the Altamont Landfill on Altamont Pass Road in Livermore, approximately 60 miles from San Francisco. The Altamont Landfill handles construction, demolition, and mixed municipal waste and serves several jurisdictions, including several East Bay cities such as Oakland, Alameda, Emeryville, and Richmond; however, San Francisco is the largest single contributor to the landfill.

The Altamont Landfill occupies approximately 2,130 acres (472 acres of disposal area) and has a maximum permitted intake capacity of 11,150 tons per day and a maximum total permitted intake capacity of 62 million cubic yards, of which 73.7 percent (45.7 million cubic yards) remained as of 2000 (CalRecycle, 2011a). The landfill is projected to have sufficient capacity to operate until at least 2025 if disposal were to continue at current rates, according to the California Integrated Waste Management Board Solid Waste Information System (SWIS) database (CalRecycle, 2011b). However, the Altamont Landfill is currently scheduled for closure on January 1, 2029 (SF Redevelopment & SF Planning, 2009).

Existing SFVAMC Fort Miley Campus

Recology handles recycling and composting for SFVAMC. Sunset Scavenger Company, a subsidiary of Recology, handles solid waste collection services. In 2010, the existing SFVAMC Fort Miley Campus generated a total of approximately 2,435 tons of solid waste, composed of approximately 1,445 tons of trash and 990 tons of recycled materials that were diverted from landfills. Additionally, approximately 48.6 tons of medical waste, 8.4 tons of hazardous waste, and 468 cubic feet of radioactive waste were generated at the Campus in 2010. Currently, solid waste from the SFVAMC Fort Miley Campus is taken to the Altamont Landfill.

[1] Sources of hazardous or toxic air emissions include but are not limited to processes (e.g., laboratory fume hood exhaust); vehicle use (diesel particulate emissions from exhaust); and proximity to existing or relocated sources of diesel or other toxic air emissions.

Mission Bay Area

Recology handles recycling and composting for the Mission Bay area. Recology's subsidiary Sunset Scavenger Company handles solid waste collection services. Solid waste from the Mission Bay area is taken to the Altamont Landfill.

Hazardous Materials

Hazardous substances include but are not limited to hazardous materials and hazardous wastes as defined under Section 25501 and Section 24117, respectively, of the California Health and Safety Code. Specifically, materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable), corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). A hazardous waste, for the purpose of this EIS, is any hazardous material that is to be abandoned, discarded, or recycled. The term "hazardous material" is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment (California Health and Safety Code, Section 25501[o]).

Medical waste is generated or produced as a result of diagnosis, treatment, or immunization of human beings or animals and the production or testing of biologicals.[2] Medical waste is either biohazardous waste or sharps waste.[3] Cultures, blood and blood products, tissues, and body parts are all considered medical waste. The transportation and disposal of medical waste are closely regulated under the California Medical Waste Management Program. The Hazardous Materials Unified Program Agency of the San Francisco Department of Public Health regulates the handling of medical waste for the existing SFVAMC Fort Miley Campus.

This section describes the nature and extent of routine hazardous materials used at the existing SFVAMC Fort Miley Campus and in the Mission Bay area, as well as the potential for upset and accident conditions under which hazardous materials could be released inadvertently.

Existing SFVAMC Fort Miley Campus

To determine the presence or absence of documented soil or groundwater contamination at or near the existing SFVAMC Fort Miley Campus, a comprehensive report was compiled by Environmental Data Resources (EDR), which listed the results of a search of public environmental databases in February 2011. This report is provided in Appendix D, "EDR DataMap Environmental Atlas for the Existing SFVAMC Campus." The report provided information about the existing SFVAMC Fort Miley Campus and nearby properties that was obtained from federal, State, regional, and local regulatory databases. A set of historical aerial photographs, dating from 1946 to 2005, was also obtained from EDR. As a hospital and health facility, SFVAMC is permitted to routinely generate, store, and handle hazardous and/or medical waste. SFVAMC is also permitted by the Bay Area Air Quality

[2] The term "biologicals" means medicinal preparations made from living organisms and their products, including but not limited to serums, vaccines, antigens, and antitoxins (California Medical Waste Management Act, California Health and Safety Code Sections 117600–118360).

[3] The term "sharps waste" refers to any device having acute rigid corners, edges, or protuberances capable of cutting or piercing, including but not limited to hypodermic needles and broken glass items (such as pipettes and vials) contaminated with biohazardous waste (California Medical Waste Management Act, California Health and Safety Code Sections 117600–118360).

Management District for air emissions related to various sources on its Fort Miley Campus, such as the emergency generators, boilers, and incinerator.

The SFVAMC Fort Miley Campus was identified in several government environmental databases (see Appendix D). A review of these databases determined that only two incidents involved the accidental release or exposure of hazardous materials, thereby posing a health risk to the public and environment.

The first incident was caused by the structural failure of a leaking underground diesel tank on the SFVAMC Fort Miley Campus, with potential contamination of adjacent soil. A report was opened in the San Francisco County Leaking Underground Storage Tank (LUST) database on February 24, 1994. This incident was also listed in the California Department of Toxic Substances Control's EnviroStor database, the San Francisco County LUST database, the California Hazardous Waste Information System (i.e., HAZNET), and the California Air Resources Board's Emissions Inventory Data (i.e., EMI) database. The leaking underground diesel tank incident was investigated and the case was subsequently closed by the County of San Francisco Local Oversight Program on April 28, 1994.

The second incident occurred on September 19, 2007. During drilling operations at the SFVAMC Fort Miley Campus for construction of the Building 200 Annex, sludge containing polychlorinated biphenyls (PCBs) from an unknown source was discovered approximately 12–15 feet below ground between Buildings 2 and 200. This incident was listed in the California Hazardous Material Incident Reporting System (i.e., CHMIRS) database. SFVAMC, working in close coordination with U.S. Environmental Protection Agency (EPA) Region 9, performed extensive corrective actions and cleanup to the maximum extent practicable to protect human health and the environment. VA also conducted five phases of site characterization and remediation actions. Approximately 1,688 tons of PCB-contaminated soil were excavated and approximately 11 tons of wall coating and concrete-wall paint wastes were generated from the concrete-wall mitigation. As a result, only residual amounts of PCB contamination remained in the subsurface soil and wall and the case was subsequently closed.

There is no indication that the current soil or groundwater at the Campus is affected by these previous incidents.

Mission Bay Area

Many past uses in the Mission Bay area involved hazardous materials; therefore, many of the sites require clean-up and monitoring before redevelopment can occur. A search of available environmental records was conducted by EDR to determine the presence or absence of hazardous materials in the Mission Bay area. In total, 5,241 sites in the study area[4] were identified in various environmental governmental databases. The locations of those sites are illustrated in the Key Map located in Section 1 of Appendix D, "EDR DataMap Environmental Atlas for the Potential New SFVAMC Mission Bay Campus." Appendix D also summarizes the number of listings from federal, State, and local databases as well as EDR proprietary records.

[4] The study area for the EDR Radius Map Report extends up to 1 mile beyond the boundary of the 2.5-square-mile area for the potential Mission Bay Campus.

3.12.2 Regulatory Framework

Hazardous substances are those substances defined as hazardous by the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) (42 U.S. Code [USC] 6901 et seq.) and the Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC 6901 et seq., as amended).

Comprehensive Environmental Response, Compensation, and Liability Act of 1980

CERCLA (also known as Superfund) provides EPA with the regulatory authority to seek out parties responsible for uncontrolled or abandoned hazardous-waste sites, and for accidents, spills, and other emergency releases of pollutants and contaminants into the environment, and to ensure their cooperation in cleanup efforts. EPA and state environmental protection or waste management agencies coordinate identification, monitoring, and response activities for Superfund sites. Construction and operation of the EIS Alternatives would involve the handling, transport, and storage of hazardous wastes; therefore, the EIS Alternatives would be subject to the regulations set forth under CERCLA.

Superfund Amendments and Reauthorization Act of 1986

The Superfund Amendments and Reauthorization Act (SARA) reauthorized CERCLA to continue cleanup activities around the country. This legislation added several site-specific amendments, clarified definitions, and imposed technical requirements, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). As a facility that would contain hazardous waste, SFVAMC would be required to conform with the regulations set forth under SARA regarding remediation of hazardous waste sites.

Resource Conservation and Recovery Act of 1976

Under RCRA, EPA regulates hazardous waste from “cradle to grave,” which includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also provides a framework for the management of nonhazardous solid wastes. Construction and operation of the EIS Alternatives would involve the generation, transportation, treatment, storage, and disposal of hazardous wastes, as well as the generation, transportation, and disposal of nonhazardous solid wastes. Therefore, the EIS Alternatives would be required to adhere to the regulations set forth under RCRA.

Hazardous and Solid Waste Amendments

The Hazardous and Solid Waste Amendments (HSWA) amended RCRA in 1984, affirming and extending the “cradle to grave” system of regulating hazardous wastes. The amendments specifically prohibited the use of certain techniques for the disposal of some hazardous wastes, focusing on waste minimization and phasing out land disposal of hazardous wastes, as well as providing corrective action for releases. Additional HSWA mandates included enhanced enforcement authority for EPA, stricter hazardous waste management standards, and a comprehensive underground storage tank program. As discussed under RCRA, the EIS Alternatives would involve the generation, transportation, treatment, storage, and disposal of hazardous wastes, as well as the generation, transportation, and disposal of nonhazardous solid wastes; therefore, they would be subject to the regulations set forth by HSWA.

Title 49 of the Code of Federal Regulations

Under Title 49 of the Code of Federal Regulations (CFR), the U.S. Department of Transportation has the regulatory responsibility for the safe transportation of hazardous materials. U.S. Department of Transportation regulations govern all means of transportation, except packages shipped by mail. Construction and operation of the EIS Alternatives would the transportation of hazardous materials to and from the project site. As such, the EIS Alternatives would be required to conform with all of the regulations set forth under CFR Title 49.

Title 10 of the Code of Federal Regulations

The federal Atomic Energy Act requires states to assume responsibility for the use, transportation, and disposal of low-level radioactive material and for the protection of the public from radiation hazards. The use of radioactive materials is closely regulated by the Nuclear Regulatory Commission (NRC), and the requirements for using radioactive byproduct materials for medical uses are set forth in 10 CFR 35 (VA, 2011).

The NRC issued a Master Materials License (MML) to VA in 2003. The NRC requires users of radioactive materials to keep radiation exposure within the agency's dose limits as low as reasonably achievable; and users are required to be licensed and undergo inspections by the NRC to ensure safe practices with radioactive materials and compliance with regulations (VA, 2011).

As a medical facility, SFVAMC may use low-level radioactive materials for medical imaging or research purposes; therefore, the EIS Alternatives would be subject to the regulations set forth under CFR Title 49.

Title 29 of the Code of Federal Regulations

Occupational safety standards are established in CFR Title 29 to minimize worker safety risks from both physical and chemical hazards in the workplace. The Occupational Safety and Health Administration (OSHA) is the agency with primary responsibility for assuring worker safety in the workplace. Under 29 CFR 1910.1200 (Hazard Communication Standard), construction workers must be informed about hazardous substances that they may encounter. Among other provisions, the regulations require that employers identify and label hazardous substances and communicate hazard information relating to hazardous substances and their handling. The hazard communication program also requires that data sheets detailing the safety of various materials be available to employees and that employee information and training programs be documented. These regulations also require employers to prepare emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

Compliance with 29 CFR 1926 Subpart B (General Safety and Health Provisions) would ensure that workers are properly trained to recognize workplace hazards and to take appropriate steps to reduce potential risks caused by such hazards. To protect workers from exposure to potential hazards, a site health and safety plan must be prepared before any work may begin at a site that is contaminated, or where work requires disturbance of building materials containing hazardous substances. OSHA includes extensive, detailed requirements for worker protection applicable to any activity that could disturb materials containing asbestos, including maintenance, renovation, and demolition. These regulations are also designed to ensure that persons working near the maintenance, renovation, or demolition activity are not exposed to asbestos.

CFR Title 29 includes special provisions for communicating about hazards to employees in research laboratories, including training employees on chemical work practices. Specific, more detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in CFR Title 29. Emergency equipment and supplies, such as fire extinguishers, safety showers, and eye washes, must also be provided and maintained in accessible places.

Department of Veterans Affairs National Health Physics Program and VA National Radiation Safety Committee

Under the guidance of VA's National Radiation Safety Committee, the VA National Health Physics Program provides regulatory oversight for the NRC's MML (described above), which entails permitting the use of radioactive materials, conducting on-site inspections, and investigating incidents (VA, 2011). The VA National Health Physics Program manages the MML and issues each Veterans Health Administration (VHA) facility a Materials Permit for all use of radioactive materials.

Department of Veterans Affairs Directives

VA and VHA have a number of directives to establish policy regarding the handling of solid and hazardous waste materials:

- VA Directive 0057 establishes the Environmental Management Program.
- VA Directive 0059 establishes policies for implementing chemicals management and pollution prevention requirements.
- VA Directive 0063 establishes procedures for waste prevention and recycling programs.
- VHA Directive 2003-030 provides procedures to ensure that hazardous chemicals are ordered, stored, handled, used, and disposed of in a manner consistent with applicable regulatory, statutory, and accreditation requirements.
- VHA Directive 1105.01 establishes policies and actions to implement the NRC MML.
- VHA Directive 2011-036 establishes policy for maintaining a safe and healthy worksite during construction- and renovation-related activities.

Emergency Planning and Community Right-to-Know Act

Enacted in 1986, EPCRA, also known as SARA Title III, provides state- and local-level infrastructure to plan for chemical emergencies. Under EPCRA, facilities that store, use, or release certain chemicals may be subject to several reporting requirements. Facility-reported information is then made publicly available to ensure that interested parties have access to this information and may become more informed about potentially deleterious chemicals present in their communities. The EIS Alternatives may involve the storage and use of chemicals regulated under EPCRA. As such, the EIS Alternatives would be required to adhere to the regulations set forth under EPCRA, including notifying the surrounding communities regarding potentially deleterious chemicals present at the project site.

Toxic Substances Control Act of 1976

TSCA provides EPA with the regulatory authority to implement requirements for reporting, recordkeeping, testing, and restrictions associated with chemical substances and/or mixtures. Specifically, under TSCA, EPA regulates the production, importation, use, and disposal of specific chemicals, such as PCBs, asbestos, radon, and lead-based paint. Demolition and construction activities associated with the EIS Alternatives may require the disposal of chemicals, such as PCBs, asbestos, or lead-based paint. Therefore, the EIS Alternatives would be subject to the regulations set forth under TSCA.

Department of Veterans Affairs Strategic Sustainability Performance Plan

The *Department of Veterans Affairs Strategic Sustainability Performance Plan* (VA SSPP) was prepared in response to Section 8 of Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance." Section 8 requires federal agencies to "develop, implement, and annually update an integrated Strategic Sustainability Performance Plan that will prioritize agency actions" to meet sustainability objectives identified in statutes, regulations, and executive orders.

The VA SSPP provides approaches to addressing sustainability goals for a variety of resource areas, including the management and reduction of solid and hazardous wastes, for VA facilities. The VA SSPP lists goals and subgoals for pollution prevention and waste elimination, summarizes current challenges that exist for VA facilities in accomplishing sustainability goals, and identifies implementation methods and programs for pollution prevention and waste elimination. The VA SSPP also identifies a diversion target of 50 percent for nonhazardous solid waste and construction and demolition material and debris by 2015.

Because a VA facility is involved, the EIS Alternatives would be subject to the performance goals established in the SSPP.

Medical Waste Management Act of 2007

The Medical Waste Management Act authorizes a local governing body to implement and enforce a medical waste management program by adopting an ordinance or resolution. A medical waste management program involves processing and reviewing medical waste management plans, inspecting on-site treatment facilities, conducting an evaluation, or reviewing records for all facilities that have been issued a large-quantity medical waste registration or permit. Medical waste generators must be inspected in response to complaints or emergency incidents; their medical waste permits issued by the local agency may be either suspended or revoked accordingly.

As a medical facility routinely handling medical waste, SFVAMC must conform with the policies set forth by the Medical Waste Management Act. Inspections ensure that businesses are in compliance with applicable regulations, including the Medical Waste Management Act.

3.12.3 Environmental Consequences

Significance Criteria

A NEPA evaluation must consider the context and intensity of the environmental effects that would be caused by, or result from, the EIS Alternatives. There is no standard federal guidance or established threshold pertaining to solid and hazardous materials. Therefore, other environmental assessment documents were reviewed and the following criteria were selected for the evaluation.

An Alternative analyzed in this EIS is considered to result in an adverse impact related to solid and hazardous materials if it would:

- be served by a landfill whose permitted capacity would be exceeded by accommodating the project's solid waste disposal needs;
- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or
- create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment and exposing the public to unhealthy levels of hazardous materials.

Assessment Methodology

The evaluation of potential impacts related to solid waste was based on a review of existing information for solid waste landfills serving the project area, such as capacity and daily intake volumes, to determine whether existing facilities could accommodate the waste likely to be generated by the EIS Alternatives. Waste generation projections were based on solid-waste generation rates of "Medical Office Building/Hospital" facilities as estimated by the California Department of Resources Recycling and Recovery (CalRecycle). For the purposes of this analysis, impacts related to solid waste are considered adverse if an EIS Alternative would cause a permitted landfill to exceed its permitted capacity.

To enable assessment of potential impacts related to hazardous materials, a comprehensive report was compiled by EDR to obtain information about sites near the project area that may be contaminated by hazardous materials, thereby exposing such materials. Additionally, hazardous materials that could be used during project construction (e.g., fuels, lubricants, paints, adhesives) and operation (e.g., laboratory chemicals, medical waste) were considered in assessing the potential for the EIS Alternatives to create a hazard to the public or environment through the transport, use, or disposal of hazardous materials. For the purposes of this analysis, impacts related to hazardous waste are considered adverse if an EIS Alternative would expose the public or the environment to unhealthy levels of hazardous materials.

Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative

Short-Term Projects

Alternative 1 short-term projects would involve the construction of 17 projects over 7 years. These short-term projects would involve construction of 600,992 gross square feet (gsf) (384,452 of which would be net new) at the existing SFVAMC Fort Miley Campus.

Construction

Solid Waste Generation

Constructing Alternative 1 short-term projects would result in a short-term increase in the generation of construction waste. Construction activities would require disposal of solid waste generated from tree removal and demolition of existing facilities, as well as removal of excess unsatisfactory soil from excavation activities, trash, and scrap materials. Most construction waste is expected to be generated by the demolition of existing buildings, which would generate approximately 945,085 cubic feet of construction waste.[5]

The VA SSPP has a diversion target for nonhazardous solid waste of 50 percent by 2015. Should this target be achieved, approximately 472,540 cubic feet of construction waste would be transported to landfills over the 7-year construction period for Alternative 1 short-term projects. City and County of San Francisco Ordinance No. 27-06, the Construction and Demolition Debris Recovery Ordinance, requires that all mixed construction and demolition debris be transported by a registered transporter and be taken to a registered facility that can process and divert a minimum of 65 percent from landfills. However, SFVAMC is not required to comply with Ordinance No. 27-06 when implementing an EIS Alternative (Williams, pers. comm., 2012).

The anticipated volume of solid waste generated by construction of Alternative 1 short-term projects could be accommodated by landfills located in the region, including the Altamont Landfill (Livermore), where SFVAMC's solid waste is currently disposed of. The Altamont facility had 73.7 percent remaining capacity as of August 2009 and is anticipated to be in operation until approximately 2029. This facility is also permitted to take construction/demolition waste.

Further, the construction contractor would be required to prepare and submit an environmental protection plan pursuant to Section 015719 of the VA Specifications. This plan requires the contractor to specify controls to be taken to manage environmental pollution, which includes the handling and disposal of solid waste. The construction contractor also must manage nonhazardous waste from building construction and demolition in accordance with Section 017419 of the VA Specifications, which requires efficient waste management and removal and legal disposal of materials. During demolition and construction, waste would be disposed of in a manner consistent with federal, State, and local regulations. Therefore, impacts of Alternative 1 short-term projects related to construction-related solid waste would be minor.

[5] The volume of demolition waste generated was calculated based on the square footage of all buildings proposed for demolition (4,000 square feet total) multiplied by the estimated height of each building (all buildings proposed for demolition are single story). The height of each building story was assumed to be 14 feet.

Hazardous Materials Exposure

The existing SFVAMC Fort Miley Campus and the surrounding area are occupied by structures that either are known to or presumably manage hazardous materials, chemicals, and petroleum products. Further, the Campus is in an area of possible serpentinitic bedrock; therefore, naturally occurring asbestos may be present in the soil. Various construction activities under Alternative 1 short-term projects, such as grading, trenching, compacting, and excavating soils, would involve the handling and movement of soil. Moving soil that contains hazardous materials (including naturally occurring asbestos) could expose workers and the public to chemicals in the soil from dust, and impacts on water quality and the environment could result if hazardous constituents were to migrate off-site. In addition, should construction require dewatering of groundwater, hazardous materials could be released. The public and the environment could be exposed to such materials if contaminated groundwater were discharged to the sanitary sewer system, causing a potentially adverse impact.

Alternative 1 short-term projects would require the demolition of existing structures. Existing building materials could include lead-based paint, asbestos-containing materials, PCBs, and fluorescent lights containing mercury vapors. Demolishing or renovating existing structures without following proper abatement procedures could expose workers or the community to hazardous building materials during construction, and future building occupants could be exposed if hazardous building materials were left in place and not properly contained. Soil around a structure could also become contaminated by hazardous building materials if these materials were inadvertently released to the environment, resulting in a potentially adverse impact.

Further, construction activities would require the construction contractor to transport hazardous materials (e.g., fuels, lubricants, paints, adhesives, contaminated soil) to and from the SFVAMC Fort Miley Campus and to use such materials. In addition, construction vehicles require the use of hazardous materials, such as oils, grease, and fuels. The contractor would likely store these hazardous materials and vehicles on-site. Hazardous materials could be released accidentally if not properly stored or transported, which could degrade soil and/or groundwater quality, potentially resulting in adverse health effects on construction workers, the public, and the environment.

To minimize construction risks related to exposure to hazardous materials, all hazardous materials would be stored, used, transported, and disposed of in strict accordance with all local, State, and federal hazardous waste regulations. OSHA regulations also mandate an initial training course and subsequent annual training for hazardous-waste workers. Worker safety regulations would require the preparation and implementation of site-specific health and safety plans in accordance with OSHA requirements. Further, the construction contractor would be required to submit an environmental protection plan in accordance with Section 015719 of the VA Specifications. This plan would describe the best management practices (BMPs) that would be implemented to minimize the risks associated with the use, storage, handling, and transport of hazardous materials and the contingency protocols to follow in the event of an accidental release or exposure during construction. Given compliance with the environmental protection plan, site-specific health and safety plan, and applicable regulations, impacts of Alternative 1 short-term projects related to potential hazardous materials exposure would be minor.

Additionally, the construction contractor would be required to implement a stormwater pollution prevention plan (SWPPP) as part of the site drains to the separate storm drain system, as well as comply with the San Francisco Public Utilities Commission's (SFPUC) Construction Site Runoff Control Program and apply for a Construction

Site Runoff Control Permit. The SFPUC does not require development of a separate erosion and sediment control plan (ESCP) for a project if a SWPPP has been prepared prepared. The SWPPP would identify the sources of sediment and other pollutants and describe BMPs to eliminate these materials from stormwater and nonstormwater discharges during construction.

For additional discussion of construction storm water management, see Section 3.8, "Hydrology and Water Quality." Implementation of the SWPPP and compliance with the requirements of the Construction Site Runoff Control Program would further reduce the potential for releases from the transport, use, or disposal of hazardous materials required during construction activities. Therefore, impacts related to hazardous wastes, substances, or materials during construction of Alternative 1 short-term projects would be minor.

Federal hazardous materials guidelines regulate exposure to and disposal of hazardous building materials, including lead, asbestos, PCBs, and mercury. SFVAMC would be required to adhere to the regulations and standards for inspection, abatement, exposure, and disposal of these hazardous building materials.[6] Adherence to these requirements would minimize, to the extent required by law, the potential health and environmental hazards of asbestos, lead, or PCBs in buildings and structures to be demolished. Thus, this impact would be minor.

Hazards and Public Safety

Construction activities, such as trenching and operation of large construction equipment, may pose a risk to public safety, such as accidental injury. However, the construction contractor would erect exclusion fencing around active construction zones to prevent the public from accessing areas immediately adjacent to or within the construction zone, as part of standard BMPs during construction. Thus, impacts on public safety during construction activities for Alternative 1 short-term projects would be minor.

Construction-related impacts related to toxic air contaminants are identified in Section 3.2, "Air Quality." Safety hazards such as earthquakes are addressed in Section 3.6, "Geology, Soils, and Paleontological Resources." Flooding hazards are addressed in Section 3.5, "Floodplains, Wetlands, and Coastal Management," and Section 3.8, "Hydrology and Water Quality." Emergency operations and access issues are addressed in Section 3.3, "Community Services."

Operation

Solid Waste Generation

Implementing Alternative 1 short-term projects would expand the facilities of the existing SFVAMC Fort Miley Campus and SFVAMC's staffing capacities; therefore, the generation of solid waste would likely increase during operation of these projects. CalRecycle estimates that medical office building/hospital land uses have a solid-waste generation rate of approximately 0.0108 ton per square foot per year; therefore, with the addition of the short-term projects, SFVAMC is estimated to generate an additional 1,561.68 tons of waste per year, for a total estimate of 3,997 tons of waste per year through 2020.[7] The VA SSPP has a diversion target for nonhazardous solid waste of 50 percent by 2015. Should this target be achieved, operation of SFVAMC is estimated to generate

[6] These regulations include VA Specification Section 028333.13, "Lead-Based Paint Removal and Disposal," and TSCA.
[7] This is based on habitable area and does not include parking structure and mechanical penthouse square footage.

1,998 tons of waste per year, which represents a 437-ton reduction in solid waste generation relative to current generation rates. The anticipated volume of solid waste could be accommodated by landfills located in the region, including Altamont, with approximately 73.7 percent remaining capacity. Therefore, impacts of the operation of Alternative 1 short-term projects related to solid waste generation would be minor.

Hazardous Waste Generation

Operation of Alternative 1 short-term projects would generate hazardous wastes similar to those currently permitted to be generated, stored, and/or released on the existing SFVAMC Fort Miley Campus. Because Alternative 1 short-term projects would involve expanding the existing SFVAMC Campus, the generation of hazardous wastes may increase. These materials would be used, stored, and disposed of in accordance with applicable laws and regulations. VA would update its existing certificates of registration for hazardous materials, radioactive-materials licenses, certificates of registration for medical waste, and medical waste permits, with updated site maps, hazardous-materials inventories, training plans, emergency operations plans, and medical-waste plans at the Campus. Given compliance with the VA SSPP and existing regulations and requirements, potential impacts from the use and storage of hazardous materials generated during the operation of Alternative 1 short-term projects would be minor.

Hazards and Public Safety

Most of the existing SFVAMC Fort Miley Campus is more than 75 years old and consists of aging buildings and infrastructure. Alternative 1 short-term projects would involve seismic, structural, mechanical, and electrical reconstruction activities that would have a long-term beneficial effect on public safety by structurally stabilizing and rehabilitating aging buildings and infrastructure.

Furthermore, to ensure public safety, SFVAMC establishes and regularly updates hazards emergency protocols in its *All-Hazards Emergency Operations Plan* (SFVAMC, 2009). This emergency operations plan:

- identifies an organized process to initiate, manage, and recover from various types of emergencies that could occur at the SFVAMC Fort Miley Campus;
- addresses emergency situations related to fire, hazardous materials/radiological/decontamination issues, utilities, bomb threats, behavioral emergencies, external emergencies, earthquakes, national disaster medical systems, VA/U.S. Department of Defense contingency hospitals, the national response framework, medical equipment, an infectious diseases/pandemic influx, a 96-hour plan, and medical surges; and
- includes detailed emergency operations procedures for staff members and departmental response and communication, recovery procedures, communication procedures, resource and asset management, and security and safety operations.

Through continued compliance with SFVAMC's *All-Hazards Emergency Operations Plan* at the Campus and adherence to applicable regulations and requirements, impacts of Alternative 1 short-term projects related to hazards and public safety would range from beneficial to minor.

Long-Term Projects

Construction

Solid Waste Generation

The construction-related impacts of the Alternative 1 long-term project related to generation of solid waste would be less than those for construction of short-term projects for Alternative 1. No demolition of existing buildings has been proposed under the Alternative 1 long-term project. Solid waste generated by the retrofitting of the existing buildings would be minimal and would be transported to landfills over the 2-year construction period for the Alternative 1 long-term project. However, SFVAMC is not required to comply with Ordinance No. 27-06 when implementing an EIS Alternative (Williams, pers. comm., 2012). The measures to reduce impacts of solid waste generation during construction of the Alternative 1 long-term project would be the same as those for construction of Alternative 1 short-term projects. Therefore, for the same reasons as described for construction impacts of short-term projects, construction impacts of the Alternative 1 long-term project related to solid waste generation would be minor.

Hazardous Materials Exposure

The construction-related impacts of the Alternative 1 long-term project related to hazardous materials would be similar to the construction impacts of Alternative 1 short-term projects identified above. Therefore, for the same reasons as described for the construction impacts of short-term projects, construction impacts of the Alternative 1 long-term project related to potential exposure to hazardous materials would be minor.

Hazards and Public Safety

The construction-related impacts of the Alternative 1 long-term project related to hazards and public safety would be similar to the construction impacts of Alternative 1 short-term projects identified above. Therefore, for the same reasons as described for the construction impacts of short-term projects, construction impacts of the Alternative 1 long-term project related to hazards and public safety would be minor.

Operation

Solid Waste Generation

Operation of the Alternative 1 long-term project would result in solid-waste generation impacts similar to those identified above for operation of Alternative 1 short-term projects. Based on CalRecycle estimates for solid waste generation for medical office buildings/hospitals, operation of the long-term project is projected to increase the generation of solid waste by an estimated 1,836 tons per year, for a total estimate for the SFVAMC Fort Miley Campus of 4,271 tons of waste per year through 2027.[8] Should the 2015 VA SSPP's diversion target for nonhazardous solid waste of 50 percent be achieved and maintained through 2027, operation of the Alternative 1 long-term project is estimated to generate 2,136 tons of waste per year. For the same reasons as described above for operation of Alternative 1 short-term projects, operational impacts of the Alternative 1 long-term project related to solid waste generation would be minor.

[8] This is based on habitable area and does not include parking structure or mechanical penthouse square footage.

Hazardous Waste Generation

Operation of the Alternative 1 long-term project would result in hazardous-waste generation impacts similar to those identified above for operation of Alternative 1 short-term projects. Therefore, for the same reasons as described above for operation of Alternative 1 short-term projects, operational impacts of the Alternative 1 long-term project related to hazardous waste generation would be minor.

Hazards and Public Safety

Operation of the Alternative 1 long-term project would result in impacts related to hazards and public safety similar to those identified above for operation of Alternative 1 short-term projects. Therefore, for the same reasons as described above for operation of Alternative 1 short-term projects, operational impacts of the Alternative 1 long-term project related to hazards and public safety would range from beneficial to minor.

Alternative 2: SFVAMC Fort Miley Campus Buildout Alternative

Short-Term Projects

Alternative 2 short-term projects at the existing SFVAMC Fort Miley Campus would be the same as short-term projects for Alternative 1, with one exception. Specifically, retrofitting of the existing Buildings 1, 6, and 8 would not occur as part of Alternative 2 short-term projects (Table 2-3 and Figure 2-3), but would instead be accomplished in the long term. Alternative 2 short-term projects include construction of a total of 485,445 gsf, which is 115,547 gsf less than for short-term projects under Alternative 1. Therefore, impacts of Alternative 2 short-term projects would be similar to or less than those of Alternative 1 short-term projects. Solid and hazardous waste impacts would be minor.

Construction

Solid Waste Generation

As with construction of short-term projects for Alternative 1, constructing Alternative 2 short-term projects would result in a short-term increase in the generation of construction waste. Construction would require the disposal of solid waste generated from tree removal, demolition of existing facilities, and removal of excess unsatisfactory soil from excavation activities and trash and scrap materials. For the same reasons as described above for the construction of Alternative 1 short-term projects, construction-related impacts of Alternative 2 short-term projects related to solid waste generation would be minor.

Hazardous Materials Exposure

As described for Alternative 1 short-term projects, the existing SFVAMC Fort Miley Campus and the surrounding area are occupied by structures that manage or may manage hazardous materials, medical chemicals, and petroleum products, and the Campus is in an area of possible serpentinitic bedrock where naturally occurring asbestos may be present in the soil. Like construction activities for short-term projects under Alternative 1, construction activities for Alternative 2 short-term projects would result in the handling and movement of soil. Moving soil, demolishing existing structures, and dewatering groundwater could result in potentially adverse

health effects on construction workers, the public, and the environment. The measures to reduce impacts of hazardous materials exposure during construction of Alternative 2 short-term projects would be the same as those described for construction of Alternative 1 short-term projects, and the potential impacts would be similar. Therefore, construction-related impacts of Alternative 2 short-term projects related to hazardous materials exposure would be minor.

Hazards and Public Safety

Like short-term projects for Alternative 1, Alternative 2 short-term projects would involve seismic, structural, mechanical, and electrical reconstruction activities that would have a long-term beneficial effect on public safety by structurally stabilizing and rehabilitating aging buildings and infrastructure. The measures to reduce impacts related to hazards and public safety during construction of Alternative 2 short-term projects would be the same as those described for construction of Alternative 1 short-term projects, and the potential impacts would be similar. Therefore, construction-related impacts of Alternative 2 short-term projects related to hazards and public safety would be minor.

Operation

Solid Waste Generation

Like Alternative 1 short-term projects, Alternative 2 short-term projects would expand the facilities of the existing SFVAMC Fort Miley Campus and SFVAMC's staffing capacities; therefore, the generation of solid waste would likely increase during operation of Alternative 2 short-term projects. For the same reasons as described above for the operation of Alternative 1 short-term projects, operational impacts of Alternative 2 short-term projects related to solid waste generation would be minor.

Hazardous Waste Generation

Like operation of Alternative 1 short-term projects, operation of Alternative 2 short-term projects would generate hazardous wastes similar to those currently permitted by State and federal agencies to be generated, stored, and/or released on the existing SFVAMC Fort Miley Campus. Because Alternative 2 short-term projects would involve expanding the existing Campus, the generation of hazardous wastes may increase. The measures to reduce impacts related to hazardous waste during operation of Alternative 2 short-term projects would be the same as those described for short-term projects under Alternative 1, and the potential impacts would be similar. Therefore, operational impacts of Alternative 2 short-term projects related to hazardous waste generation would be minor.

Hazards and Public Safety

Like Alternative 1 short-term projects, Alternative 2 short-term projects would involve seismic, structural, mechanical, and electrical reconstruction activities that would have a long-term beneficial effect on public safety by structurally stabilizing deteriorating buildings and infrastructure. The measures to reduce impacts related to hazards and public safety during operation of Alternative 2 short-term projects would be the same as those described for short-term projects of Alternative 1, and the potential impacts would be similar. Therefore, operational impacts of Alternative 2 short-term projects related to hazards and public safety would range from beneficial to minor.

Long-Term Projects

Alternative 2 long-term projects at the existing SFVAMC Fort Miley Campus would be the same as the Alternative 1 long-term project, with one exception. Specifically, three additional existing buildings—Buildings 1, 6, and 8—would be retrofitted as part of Alternative 2 long-term projects (Table 2-4 and Figure 2-4). Alternative 2 long-term projects include construction of a total of 285,487 gsf, which is 115,487 gsf more than under the Alternative 1 long-term project, because Alternative 2 includes construction of Building 213 along with the seismic retrofit of Buildings 1, 6, and 8. Therefore, construction impacts of Alternative 2 long-term projects would be similar to, although slightly greater than, those of the Alternative 1 long-term project. Solid and hazardous waste impacts would be minor.

Construction

Solid Waste Generation

The impacts of construction of Alternative 2 long-term projects related to solid waste generation would be less than those of construction of short-term projects under this alternative. No demolition of existing buildings is proposed. The measures to reduce impacts of solid waste generation during construction of Alternative 2 long-term projects would be the same as those described for construction of Alternative 1 short-term projects. Therefore, for the same reasons as described for construction impacts of short-term projects for Alternative 1, construction impacts of Alternative 2 long-term projects related to solid waste generation would be minor.

Hazardous Materials Exposure

The impacts of construction of Alternative 2 long-term projects related to hazardous materials exposure would be similar to the construction impacts of Alternative 1 short-term projects. Therefore, for the same reasons as described for the construction impacts of short-term projects for Alternative 1, construction impacts of Alternative 2 long-term projects related to potential hazardous materials exposure would be minor.

Hazards and Public Safety

The impacts of construction of Alternative 2 long-term projects related to hazards and public safety would be similar to the construction impacts of Alternative 1 short-term projects. Therefore, for the same reasons as described for the construction impacts of short-term projects for Alternative 1, construction impacts of Alternative 2 long-term projects related to hazards and public safety would be minor.

Operation

Solid Waste Generation

Operation of Alternative 2 long-term projects would result in impacts related to solid waste generation similar to those identified above for operation of Alternative 1 short-term projects. For the same reasons as described above for operation of short-term projects for Alternative 1, operational impacts of Alternative 1 long-term projects related to solid waste generation would be minor.

Hazardous Waste Generation

Operation of Alternative 2 long-term projects would result in impacts related to hazardous waste generation similar to those identified above for operation of Alternative 1 short-term projects. Therefore, for the same reasons as described above for operation of short-term projects for Alternative 1, operational impacts of Alternative 1 long-term projects related to hazardous waste generation would be minor.

Hazards and Public Safety

Operation of Alternative 2 long-term projects would result in impacts related to hazards and public safety similar to those identified above for operation of Alternative 1 short-term projects. Therefore, for the same reasons as described above for operation of short-term projects for Alternative 1, operational impacts of Alternative 2 long-term projects associated with hazards and public safety would range from beneficial to minor.

Alternative 3: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative

Short-Term Projects

Alternative 3 short-term projects (during both construction and operation) would be the same as short-term projects under Alternative 1; thus, all Alternative 3 short-term projects would be located at the SFVAMC Fort Miley Campus. See Tables 2-1 and Figure 2-1 for Alternative 3 short-term projects. Therefore, impacts of Alternative 3 short-term projects related to solid waste generation, hazardous materials exposure, and hazards and public safety would be the same as the impacts of Alternative 1 short-term projects. These impacts would range in significance from beneficial to minor.

Long-Term Projects

Alternative 3 long-term projects (during both construction and operation) would involve developing 170,000 gsf for ambulatory care and parking structure uses at a potential new SFVAMC Mission Bay Campus. See Figure 2-5 for the location of the off-site portion of Alternative 3.

Construction

Solid Waste Generation

Alternative 3 long-term projects would involve new construction at a potential new SFVAMC Mission Bay Campus. It is unknown whether any demolition would be required to construct a potential new Campus. The measures to reduce impacts of solid waste generation during construction of Alternative 3 long-term projects would be the same as those described for short-term projects under Alternative 1. Therefore, the impact of Alternative 3 long-term projects related to a long-term increase in generation of construction waste would be similar to the impact of construction of Alternative 1 short-term projects. Impacts would be minor.

Hazardous Materials Exposure

Alternative 3 long-term projects would involve new construction at a potential new SFVAMC Mission Bay Campus. The measures to reduce impacts of hazardous materials exposure during construction of Alternative 3

long-term projects would be the same as those described for short-term projects under Alternative 1, and the potential impacts of Alternative 3 long-term projects related to hazardous materials exposure during construction would be similar to those addressed for construction of Alternative 1 short-term projects. Therefore, impacts would be minor.

Hazards and Public Safety

Alternative 3 long-term projects would involve new construction at a potential new SFVAMC Mission Bay Campus. The potential impacts related to hazards and public safety during construction of Alternative 3 long-term projects would be similar to the impacts of construction of short-term projects under Alternative 1, and the measures to reduce those impacts would be the same. Therefore, impacts would be minor.

Operation

Solid Waste Generation

Based on CalRecycle estimates for solid waste generation for medical office buildings/hospitals, the potential new SFVAMC Mission Bay Campus would generate approximately 1,188 tons of waste per year,[9] an estimated 1,247 tons less waste per year than is generated by the existing SFVAMC Fort Miley Campus. Should the VA SSPP diversion target for nonhazardous solid waste of 50 percent be achieved and maintained through 2027, operation of Alternative 3 long-term projects is estimated to generate 1,188 tons of waste per year. No net new solid waste would be generated at the existing SFVAMC Fort Miley Campus under Alternative 3 long-term projects, because no additional construction would occur at this site. Therefore, under Alternative 3 long-term projects, the existing Campus would generate an estimated 1,562 tons of waste per year.

Should the VA SSPP diversion target for nonhazardous solid waste of 50 percent be achieved and maintained through 2027, operation of Alternative 3 long-term projects would generate an estimated 2,592 tons of waste per year. Between the potential new SFVAMC Mission Bay Campus and the existing Fort Miley Campus, a total of 5,185 net new tons of waste would be generated per year, or 2,592 tons of waste per year with the 50 percent solid-waste diversion target. Operation of Alternative 3 long-term projects would ultimately result in solid waste impacts similar to those associated with operation of short-term and long-term projects for Alternative 1. Therefore, impacts would be minor.

Hazardous Materials Exposure

Operation of the potential new SVAMC Mission Bay Campus would require the handling, storage, use, and/or disposal of hazardous waste typically generated by medical facilities; therefore, SFVAMC would obtain all necessary permits (such as a Hazardous Material Registration, Hazardous Materials Certificate of Registration, and Large Quantity Generator permit for medical waste from the Hazardous Materials Unified Program Agency of the San Francisco Department of Public Health) to perform these activities for the potential new Campus, once its location has been identified. As a result, impacts would be minor.

[9] This is based on habitable area and does not include parking structure square footage. The calculation is based on 110.000 square feet of habitable space, not including the 30,000 square feet of parking proposed at the Mission Bay Campus.

Hazards and Public Safety

The potential new SFVAMC Mission Bay Campus would be composed of new, structurally sound, and retrofitted facilities that would have a long-term benefit on public safety. Furthermore, as during operation of Alternative 1 short-term projects, the potential new Campus would adhere to the emergency protocols in SFVAMC's *All-Hazards Emergency Operations Plan*. Therefore, operation of Alternative 3 long-term projects would result in impacts related to hazards and public safety similar to those for operation of the long-term project under Alternative 1. Impacts would range from beneficial to minor.

Alternative 4: No Action Alternative

Short-Term and Long-Term Projects

Construction

Under Alternative 4, there would be no new construction and no retrofitting of existing buildings. Therefore, no construction-related impacts related to solid waste, hazardous waste, or hazards would occur.

Operation

Under Alternative 4, the LRDP would not be implemented. Therefore, no project-related impacts related to solid waste or hazardous waste would occur. However, because retrofitting of existing SFVAMC buildings would not occur under this alternative, continued operation of the existing SFVAMC Fort Miley Campus could compromise public safety due to aging buildings and infrastructure as well as potential seismic hazards.

3.12.4 References

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