3.6 HAZARDOUS MATERIALS

3.6.1 AFFECTED ENVIRONMENT

The United States, Mexico, and Spain used the Presidio as a military base for 220 years. The United States Army management included the installation of underground storage tanks and pipelines, creation of landfills, and usage of herbicides, fungicides and insecticides that have impacted environmental conditions in the Presidio. Based upon historical documentation and data collected from recent investigations, specific areas within the Presidio have been identified as likely to contain impacted soil and/or groundwater (see Figure 3.6-1). Dumping, equipment maintenance areas, fuel storage and distribution areas, and hazardous material storage areas located throughout the Presidio have resulted in site-specific areas of potential petroleum hydrocarbon, polynuclear aromatic hydrocarbons, solvents, pesticides, heavy metals or cyanide impacts (National Park Service, 1994). Trenching, excavation, and dewatering associated with the proposed project alternatives would traverse through or adjacent to several of these identified impacted areas, as shown on Figure 3.6-1. Some areas within the Letterman Complex area believed to contain surficial fill soils of various ages. Experience with fill soils in other locations of the Presidio indicates these soils occasionally contain building debris or contaminated soils. Recycled water distribution lines for both Alternative 1 and 2 would cross through this area.

A fuel distribution system and associated underground storage tanks were formerly located in the vicinity of the water recycling facility alternatives and subsurface storage sites. The Trust is continuing to investigate soil and groundwater conditions and assess petroleum hydrocarbon impacts that were initially identified by the U.S. Army. Remediation activities in the vicinity of the Letterman Complex will likely include excavation of impacted soil, although shallow groundwater depths (approximately five to 10 feet below ground surface) in this region will likely limit the vertical extent of over-excavation.

Due to considerable age of many Presidio structures, lead-based paint and asbestos are commonly identified in historical buildings. The three proposed locations for the water recycling facility, (Buildings 1040, 1062, and 1063) have been assessed for the presence of asbestos by the Trust. Past asbestos removal (abatement) has occurred; however, friable asbestos remains in all three structures. Building 1469, which houses the remote storage reservoir, is a concrete structure and therefore no asbestos issues exist with this building. In general, structures constructed before December 31, 1978 are at-risk for lead-based paint, and asbestos was commonly used as a building material until 1978. An evaluation to determine the potential presence of lead-based paint has not been conducted on these four structures (Feickert 2001). All four buildings were constructed and subsequently renovated before 1978, and may therefore contain lead-based paint.

REGULATORY SETTING

Definitions

Hazardous Materials

Hazardous materials are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gases).[1] Hazardous materials have been and are commonly used in commercial, agricultural, and industrial applications, as well as in residential areas to a limited extent.

Hazardous Waste

A hazardous waste is any hazardous material that is discarded, abandoned, or is to be recycled. The criteria that render a material hazardous also make a waste hazardous.[2] If improperly handled, hazardous materials and wastes can result in public health hazards if released to the soil or groundwater or through airborne releases in vapors, fumes, or dust.

Worker Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the work place. The California Division of Occupational Safety and Health (Cal OSHA) and the federal Occupational Safety and Health Administration are the agencies responsible for assuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices (OSHA 1985). These standards would be applicable to both construction and operation.

3.6.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

ALTERNATIVE 1 (CENTRALIZED STORAGE)

Possible Exposure to Lead-Based Paint and Asbestos

The proposed structures were constructed prior to 1950, and lead-based paint or asbestos are likely present. Renovation could therefore expose construction workers to hazardous levels of lead-based paint and asbestos. Consistent with relevant OSHA requirements, an environmental site health and safety plan would be prepared prior to any building rehabilitation activities to address worker safety hazards that may arise during renovation.

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1 Title 22 of the California Code of Regulations, Division 4.5, Chapter 11, Article 3.

2 California Health and Safety Code, Section 25151.

Presidio Water Recycling Project
Figure 3.6-1
Environmental Remediation Sites
SAN FRANCISCO BAY
PACIFIC OCEAN
Alternative 1
Pipe-Phase 1
Pipe-Phase 2
Res. Overflow
Solids Return
Wastewater Supply
Alternative 2
Pipe-Phase 1
Pipe-Phase 2
Res. Overflow
Solids Return
Wastewater Supply
User Connections
Possible Storage Tank Locations
Alternative Treatment Plant Sites
Fuel Distribution System Lines
Abandoned
Assumed Removed and Backfilled
Removed
Environmental Remediation
500 0 500 1000 Feet
*NOTE: Underground Fuel Storage Tanks not shown

The construction contractor would be required to comply with all applicable OSHA regulations regarding worker safety. Both the federal and Cal OSHA regulate worker exposure during construction that impact lead-based paint. Interim Final Rule found in 29 CFR Part 1926.62 covers construction work where employees may be exposed to lead during such activities as demolitions, removal, surface preparation for re-painting, renovation, clean up and routine maintenance. The OSHA-specified method of compliance includes respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, and training. No minimum level of lead is specified to activate the provisions of this regulation. Should lead-based paint be detected, a lead-based paint abatement plan would also be prepared and implemented. Elements of the plan shall include the following:

- Containment of all work areas to prohibit off-site migration of paint chip debris.
- Removal of all peeling and stratified lead-based paint on building surfaces and on non-building surfaces to the degree necessary to safely and properly complete demolition activities per the recommendations of the survey. The demolition contractor shall be identified as responsible for properly containing and disposing of intact lead-based paint on all equipment to be cut and/or removed during the demolition.
- Providing on-site air monitoring during all abatement activities and perimeter monitoring to ensure no contamination of work or adjacent areas.
- Cleanup and/or HEPA vacuum paint chips.
- Collection, segregation, and profiling waste for disposal determination.
- Post-demolition testing of soil to assure that soil at the site is not contaminated by lead-based paint.
- Providing for appropriate disposal of all waste.

Asbestos abatement would be conducted prior to renovation of the existing buildings, consistent with existing regulations. All identified asbestos-containing materials would be removed and appropriately disposed of by a state certified asbestos contractor. The renovation or demolition of buildings containing asbestos requires retaining contractors who are licensed to conduct asbestos abatement work and notifying the Bay Area Air Quality Management District (BAAQMD) ten days prior to initiating construction and demolition activities.

The impacts to worker health and safety from exposure to lead-based paint or asbestos from renovation activities would be minimized through compliance with existing safety regulations, and the impact would be less-than significant.

Possible Exposure to Contaminated Soil and Groundwater

Trenching and excavation would occur in areas identified as potentially impacted from dumping, artificial fill, and petroleum hydrocarbons. For example, leakage of materials from former fuel distribution lines southwest of the Main Post may have resulted in impacts to soil along this utility corridor. The Letterman Complex was previously used as a fuel storage and distribution area, and as been identified as likely to contain petroleum hydrocarbon impacted soil and groundwater.

Contaminated soil and groundwater encountered during construction operations would be handled in accordance with standard practices and protocols to ensure worker safety and minimize the chances of releases of contaminants. These standard practices include preparation of site-specific health and safety plans, and handling of petroleum-bearing soils in accordance with state and/or federal regulations.

The Trust would be required to comply with all applicable OSHA regulations regarding worker safety, and relevant clean up activities consistent with the Presidio Contingency Action Plan. The OSHA-specified method of compliance would be dependent upon the severity of impact to soil and groundwater. Appropriate measures may include eye protection and specific handling requirements.

> *The impacts to worker health and safety from exposure to impacted soil during trenching and excavation would be minimized through compliance with existing safety and remediation regulations, and the impact would be less-than significant.*

Possible Exposure to Hydrocarbon Impacted Groundwater

Groundwater elevations at the site of the proposed underground storage tanks are approximately five to 10 feet below grade (San Francisco County Transportation Authority 2001). The proposed project would involve excavation to approximately 30 feet below grade for the installation of recycled water storage tanks, and would likely require dewatering. Past site operations have included storage and distribution of petroleum products, and the extent of groundwater impact has not been fully assessed.

Dewatering associated with tank installation would discharge extracted groundwater into the sanitary sewer system under the Trust's existing Industrial Discharge Permit (IDP). Sampling of extracted groundwater would occur prior to discharge to assure compliance with constituent limits set forth in the Trust's IDP, and the Trust would comply with all applicable regulatory agency requirements set forth by the City of San Francisco, Department of Public Works, regarding disposal of groundwater generated by site dewatering.

> *Potential environmental impacts associated with disposal of hydrocarbon impacted groundwater from construction dewatering would be less-than significant.*

Use of Hazardous Materials During Construction

Construction would involve the use of certain hazardous materials such as fuels, oils, paint, solvents and glues. Inadvertent release of large quantities of these materials into the environmental could adversely impact soil, surface waters, or groundwater quality. However, the on-site storage and/or use of large quantities of materials capable of impacting soil and groundwater are not typically necessary for a project of the proposed size and type. Implementation of measures as part of the project's BMP-6 (see Section 2.3) for handling of hazardous materials during construction would minimize the potential adverse effects to groundwater and soils.

> *Impacts associated with handling and use of hazardous materials during construction would be less-than significant.*

Use of Hazardous Materials During Plant Operation

The treatment technology at the proposed water recycling facility would rely on ultra-violet light for disinfection, thereby minimizing the volume and type of chemicals used and stored at the facility. However, operation of the wastewater reclamation facility would include the storage and use of sodium hypochlorite, which is considered a "strong oxidizer." Sodium hypochlorite, commonly known as household bleach, would be used as a cleaning solution for membrane maintenance, odor control, and as a residual disinfectant. A thirty-day supply of bleach would be stored on-site at any given time. Monthly deliveries of bleach would be made by truck. Daily use would range from 4 to 10 gallons per day for Phase 1 and Phase 2, respectively. The transportation of sodium hypochlorite would be governed by U.S. Department of Transportation regulations, while the storage and handling would be governed by Cal OSHA regulations.

> *Impacts associated with handling and use of hazardous materials during future operation of the water recycling plant would be less-than significant.*

ALTERNATIVE 2 (MULTIPLE STORAGE SITES)

General Hazardous Materials Effects

Potential hazardous materials impacts, mitigation measures, and significance levels associated with Implementation of Alternative 2 would be the similar to those associated with Alternative 1.

> *Alternative 2 would have no significant impacts regarding hazardous materials, with implementation of mitigation measures identified under Alternative 1.*

ALTERNATIVE 3 (NO ACTION)

General Hazardous Materials Effects

Under the No Action alternative none of the water recycling facilities would be constructed or operated. The remediation activities described above (e.g., lead and asbestos removal) would be implemented as part of future projects to rehabilitate and reuse affected buildings.

> *The No Action Alternative would have no significant impacts associated with hazardous materials.*