3.7

HAZARDS AND HAZARDOUS MATERIALS

3.7.1 Introduction

This section addresses hazards and hazardous materials, including existing hazardous conditions, applicable regulations, the potential impacts associated with existing hazards and hazardous materials on sensitive receptors associated with the proposed Project, and the potential hazards and hazardous materials that would be introduced by the proposed Project that may have an adverse effect on public health and safety. For impacts associated with known or suspected soil or groundwater contamination in the area of the proposed Project, please refer to Section 3.6, "Groundwater and Soils," and Appendix F for the Preliminary Hazardous Materials Assessment. For impacts associated with health risks from air contaminants please refer to Section 3.2, "Air Quality and Meteorology."

3.7.2 Environmental Setting

3.7.2.1 Hazardous Materials

Hazardous materials are generally the raw materials for a product or process that may be classified as toxic, flammable, corrosive, or reactive. Hazardous materials that may be stored, handled, or transported within the study area are classified by the following:

- corrosive materials—solids, liquids, or gases that can damage living material or cause fire;
- explosive materials—any compound that is classified by the National Fire Protection Association (NFPA) as an A, B, or C explosive;
- oxidizing materials—any element or compound that yields oxygen or reacts when subjected to water, heat, or fire conditions;

- toxic materials—gases, liquids, or solids that may create a hazard to life or health by ingestion, inhalation, or absorption through the skin;
- unstable materials—those materials that react from heat, shock, friction, contamination, etc., and are capable of violent decomposition or autoreaction but are not designed primarily to be explosives;
- radioactive materials—those materials that undergo spontaneous emission of radiation from decaying atomic nuclei; and
- water-reactive materials—those materials that react violently or dangerously upon exposure to water or moisture.

3.7.2.2 Existing Onsite Operational Hazards

Unlike many other tenant sites of the Port, the proposed project site does not support waterside container storage and transport operations. The waterfront at Slip 5 is not capable of handling cargo containers or shipping activities. The handling, storage, and transport of hazardous material are generally limited to the LADWP Marine Tanks, the LADWP Harbor Generating Station (HGS), existing gas and petroleum pipelines, business operations located within the Avalon Development District, and the offsite Olympic Tank Farm that has been included in the analysis because it is a feasible relocation site for the LADWP Marine Tank Farm.

3.7.2.2.1 LADWP Marine Tanks

There is one liquid bulk storage facility, the LADWP Marine Tank Farm, located within the proposed project area in Planning Area (PA) 5 of the Port Plan and PMP, between Fries Avenue and Avalon Boulevard, north of Water Street and south of A Street. This storage facility consists of three bulk storage tanks and associated petroleum pipelines. The facility stores gas oil and is expected to continue to store gas oil until the storage tanks are relocated (Lee, pers. comm. 2008). LADWP owns the site and the tanks, which it leases to the Valero Energy Corporation. See Table 3.7-1 for a detailed description of the products stored on site and Figure 2-2 for the location of the LADWP Marine Tanks.

A Phase II Environmental Site Assessment (Kleinfelder 2004b) was performed on the site and included the collection and analysis of soil, soil vapor, and groundwater samples to assess whether the soil and groundwater at the site has been impacted by liquid bulk fuel storage activities. The analysis and its conclusions are discussed in Section 3.6, “Groundwater and Soils.”

Table 3.7-1: Liquid Bulk Facilities within the Wilmington Waterfront Project Area

Facility Number	*Approximate Storage Volume (Barrels)*	*Commodity*	*Flash Point*	*Diked Area (Estimated square footage)*
TK-450.0011	450,000	Hydro Treated Gas Service	180°F	276,000
TK-450.002	450,000	Raw Gas Oil Service	151°F	
TK-30.001	30,000 barrels	Hydro Treated Gas Oil Service	180°F	22,400
Source: Lee, pers. comm.2008.				

3.7.2.2.2 Existing Petroleum Pipelines

The region surrounding the Port (the Los Angeles Basin) contains a number of natural oil and gas fields. Development and use of these natural resources have been ongoing in the area for nearly a century. As a result, there are a variety of oil-production and refining facilities scattered throughout the area and connected by various pipelines. Although these oil facilities and pipelines are engineered with safety standards and undergo extensive environmental review prior to their approval and construction, and rigorous safety testing prior to their operation, the nature of the materials handled by these facilities and pipelines nonetheless poses risks to people, the environment, and property in the vicinity. Upsets are possible even under normal operating conditions for oil pipelines and oil facilities, and they therefore pose a risk of exposing the surrounding population to accidental releases of materials. These releases can subsequently lead to biological and/or hydrological damage, fires, and/or releases of petroleum fire hazardous combustion byproducts (Pacific L.A. Marine Terminal LLC Crude Oil Terminal Draft SEIS/SEIR April 2008.)

There are several active petroleum pipelines within the general vicinity of the proposed Project area. Primarily these active pipelines extend along Water Street and Fries Avenue. The pipelines range from 1 to 18 inches in diameter. The owner-operators of these pipelines are responsible for the maintenance and upkeep of the existing pipelines per the federal and state regulations described below in Section 3.7.3, "Applicable Regulations." Although the owners and operators of the pipelines change frequently, currently they include the following companies: Texaco, GATX, Ultramar, Shell, Unocal, Mobil, and Exxon. These lines are not associated with the LADWP Marine Tank site but rather are part of the petroleum pipeline infrastructure of the Port. These existing pipelines would remain under the proposed Project.

The LADWP Marine Tank site does have its own pipeline infrastructure on site to support the tanks. The onsite pipeline infrastructure would be removed as part of the proposed Project when the storage tanks are removed. The connections of the onsite

pipeline to the greater Port petroleum pipeline infrastructure (described above) would be capped and the onsite pipelines would be removed and use would be discontinued.

3.7.2.3 Offsite Operational Hazards

3.7.2.3.1 Harbor Generating Station and Peaker Units

Physical Setting

The Harbor Generating Station is located to the west of Fries Avenue at the intersection of Fries Avenue and A Street. In addition, there are five combustion turbines (also known as Peaker Units) associated with the Harbor Generating Station that are located to the east of Fries Avenue. The HGS is owned and operated by LADWP and is located on an 18.3-acre site outside the existing jurisdiction of the Port Plan and the PMP. It was originally constructed in the late 1940s, with the Peaker Units added in 2001, to provide local in-basin generation, voltage and VAR (Volts Ampere Reactive) support, transmission support, southern system security, and emergency support for the LADWP electrical system. The basic power generation activities and corresponding facility areas are power generation units, electrical switching and receiving, and fuel storage tanks. However, the HGS does have diesel fixed generators to provide emergency back-up power.

The primary fuel for the simple- and combined-cycle combustion turbines of the HGS is natural gas. The Peaker Units are typically used at times of peak demand when all other supply sources are fully employed, during transmission system disturbances or emergencies, or when other units are forced off line. Both the HGS and Peaker Units use a selective catalytic reduction (SCR) system to generate electricity to meet SCAQMD requirements. The SCR system uses aqueous ammonia to reduce oxides of nitrogen (NO_X) emissions in the presence of a catalyst. The HGS is also permitted to burn distillate oil (Diesel No. 2) in the event of a natural gas curtailment.

The HGS stores and uses hazardous materials on site. There are three fuel oil bulk storage tanks (Diesel No. 2) at two different locations (two tanks at the HGS west of Fries Avenue and one tank at the corner of Fries Avenue and A Street), two existing aqueous ammonia bulk storage tanks along the western side of the main building, and an aqueous ammonia pipeline extending east from the ammonia bulk storage tanks, under Fries Avenue, to the Peaker Units, cooling towers, and transformers. Additionally, there is a natural gas pipeline that feeds the HGS, which extends along Fries Avenue.

Regulatory Framework

Since the HGS handles, stores, and uses hazardous materials they are required by state and local agencies (LAFD, LACFD, DTSC, SCAQMD, and Cal/OSHA) to have safety mechanisms in place to protect employees. These mechanisms include a Risk

Management Plan and emergency preparedness and evacuation procedures should a hazardous accident occur. Other safety measures include:

- digitally controlled monitoring devices, such as the use of an ammonia;
- detector, level sensors, and an alarm to control room if there is an accidental release;
- separate containment areas for each ammonia tank;
- pressure change alarms;
- 24/7 operating crew;
- the aqueous ammonia tanks are located under a roof to suppress vapors and reduce the temperature;
- the truck unloading area is sloped with containment basin;
- there is a closed loop truck delivery system, with an internal valve system on the trucks with a non-return check valve for truck unloading

Additional applicable regulations and requirements are described in further detail below.

California Assembly Bill 3777

In 1986, California Assembly Bill 3777 first required facilities handling Acutely Hazardous Materials (AHMs) to establish Risk Management Prevention Programs (RMPPs). The objective of these regulations was to identify facilities that handle AHMs above certain threshold limits and to require these facilities to develop RMPPs to address the potential hazards involved. The California Office of Emergency Services published guidelines for preparing RMPPs in November of 1989. In some cases, administering agencies (usually cities or counties responsible for emergency response and preparedness) have issued additional guidance. The RMPP program has been replaced with the California Accidental Release Program (Cal-ARP) discussed below.

The EPA established a federal Risk Management Program (RMP) under the Clean Air Act Amendments (CAAA), which were promulgated in November 1990. The CAAA mandated that EPA create regulations to require facilities possessing listed chemicals above specified threshold amounts to develop and implement Risk Management Plans. A Risk Management Plan contains a hazard assessment of potential worst-credible accidents, an accident prevention program, and an emergency-response program. Federal RMP regulations were promulgated in June 1996. The Federal RMP was provisionally accepted by California in January 1997 to replace the California RMPP and California regulations. The Cal-ARP was finalized by June 1997, as California's version of the RMP. The HGS is subject to the Cal-ARP and EPA RMP reporting requirements.

Port of Los Angeles Risk Management Plan

As the proposed Project is in proximity to the HGS and Peaker Units, and these facilities handle and store liquid bulk products (aqueous ammonia and diesel oils), a risk analysis was conducted pursuant to the Port's Risk Management Plan. The analysis addressed the storage of diesel oil at the HGS since diesel oil No. 2 has a flashpoint range of between 125–190°F and is therefore considered a hazardous commodity (flash point greater than 140°F). The analysis also addressed the handling and storage of aqueous ammonia at the HGS because it is capable of producing a toxic vapor cloud. Analysis on how the potential hazards associated with the storage tanks affect the proposed Project is provided in Section 3.7.4.1.4.

2001 HGS Environmental Impact Report

In 2001 the South Coast Air Quality Management District approved the Environmental Impact Report for the Los Angeles Department of Water and Power Electrical Generating Station Modifications Project (SCH#2000101008). This EIR analyzed the physical environmental impacts associated with the modification of three power plants, including the HGS, to meet AQMD standards. The proposed project in the EIR included the following changes to HGS:

- installation of five 47-MW combustion turbines (the existing Peaker Units identified adjacent to the Wilmington Waterfront Development Project), each with a SCR system that will use aqueous ammonia to reduce NO_X emissions;
- installation of a pipeline to transport aqueous ammonia from existing aboveground storage tanks at the HGS under Fries Avenue to the new Peaker Units;
- installation of new natural gas line and delivery of natural gas from the main line to the five new Peaker Units; and
- installation of a 565 kW diesel fired generator to provide emergency power for "black start" situations.

The expansion also included an incremental increase in the quantity of aqueous ammonia being delivered to the HGS. Under the proposed project HGS would receive one 5,000-gallon tanker truck delivery of aqueous ammonia per week, which would include pumping the aqueous ammonia into the storage tanks through a liquid fill line while extracting ammonia vapor from the tank through a vapor recovery system.

The EIR analyzed the new ammonia-related components of the HGS in the Hazards and Hazardous Material section evaluating both the probability of an accidental spill, release, or explosion of aqueous ammonia and the consequences of such a release.

The EIR ultimately determined that although remote and improbable, the potential does exist to exceed the EPA risk management exposure endpoints off site when aqueous ammonia is stored, transported, and used in association with the proposed

project activities. Mitigation measures were included to further reduce the risks associated with the proposed project. The mitigation measures primarily focused on risk management and safety mechanisms that would significantly reduce the likelihood of spills or releases of ammonia. However, the EIR determined the expansion would still present the potential for significant hazards impacts based on the transport, storage and use of aqueous ammonia, since the SCAQMD's significance determination for hazards relies on the consequences of a hazardous release, spill, or explosion rather than the potential for a release. Therefore, the EIR was approved with significant and unavoidable findings for hazards and hazardous materials. A Statement of Overriding Considerations was prepared identifying that the emissions reductions associated with using the aqueous ammonia in the SCR process provide benefits which outweigh the risk of transporting, storing, and using the aqueous ammonia.

3.7.2.3.2 Olympic Tank Site (Off Site)

As noted in Chapter 2, "Project Description," the Olympic Tank Farm site is identified as a feasible relocation site for the storage tanks currently located at the Marine Tank Farm site. Relocation may not occur at this site as the action to relocate the storage tanks is not certain; however, the analysis of the whole of the action requires that a potential relocation site be analyzed since the removal of the existing Marine Tank Farm facility is proposed and it is reasonably foreseeable that the existing facility would be relocated and continue operation at the new location. In the event relocation were to occur, LAHD would not be the lead agency, and it is possible another site would be chosen as more planning occurs. The Olympic Tank site is bound to the north by Roubidoux Street, to the east by Goodrich Venue, to the south by railroad rights-of-way, and to the west by Alameda Street (Figure 2-12). The Olympic Tank site is comprised of several aboveground storage tanks associated with the Ultramar Olympic Tank Farm. The aboveground storage tanks have previously been and continue to be used to store bulk liquid petroleum products.

The Olympic Tank site is outside the jurisdictional boundary of the Port Plan and PMP and is not a Port tenant; therefore, it is not required to follow Port policies or guidelines. However, currently there are no existing vulnerable resources as defined by the PMP RMP within the immediate vicinity of the Olympic Tank site.

3.7.2.4 Existing Public Emergency Services

Emergency response/fire protection for the proposed project area is provided by LAFD; landside and waterside security is provided primarily by the Port Police, LAPD, LAFD, and the USCG. Two large fireboats and three small fireboats are strategically placed within the harbor. There are also fire stations equipped with fire trucks located within the proposed project vicinity and nearby in the communities of Wilmington and San Pedro. Public services, including the availability of fire and police services, are discussed in Section 3.13, "Public Services."

The following emergency plans apply to the Port area:

- LAHD's Emergency Operations and Organization Manual (September 2006)
- City of Los Angeles Tsunami Response Plan Annex of the Emergency Operations and Organization Manual (September 2007)
- City of Los Angeles Hazardous Materials Annex of the Emergency Department Master Plan and Procedures (December 1993)
- LAHD's Emergency Procedures Plan (July 2000)
- LAHD's evacuation plans

The City of Los Angeles' LAHD Emergency Operations and Organization Manual, the Tsunami Response Plan Annex, and the Hazardous Materials Annex provide general emergency response guidance to all City departments, including LAHD. LAHD is responsible for following this guidance in the event of an emergency.

The Homeland Security Division for LAHD maintains the control of LAHD's Emergency Procedures Plan and is responsible for the current update of the plan. This plan is designed to provide overall guidance on how the department responds to general emergencies, including guidance for LAHD employees. It is meant to identify procedures and organize operations during general emergencies at locations where LAHD employees work. The Emergency Procedures Plan does not address tenant locations or the emergency procedures for those locations (Malin pers. comm. 2008a, 2008b).

Tenants of the Port are required to have their own emergency management plans. These requirements and the adequacy of the tenant emergency plans would be enforced by LAFD, the Port Police, the Homeland Security Division of LAHD, and the USCG.

Port evacuation plans are maintained and managed by the Area Maritime Security Evacuation Committee (AMSEC) and cover all areas encompassed by the Ports of Los Angeles and Long Beach. These plans are being revised and are updated on an as-needed basis by the committee. Additionally, LAHD is currently developing an Emergency Notification System that would support Port evacuation plans. Port Police is responsible for implementing the evacuation plans. There is sensitive security material in them, so they are not available to the public (Malin pers. comm. 2008a).

3.7.2.5 Homeland Security of the Port

3.7.2.5.1 Terrorism

Prior to the events of September 11, 2001, the prospect of a terrorist attack on a U.S. port facility or a commercial vessel in a U.S. port would have been considered highly speculative under CEQA and not analyzed. The climate of the world today has added

an additional unknown factor for consideration (i.e., terrorism). There are limited data available to indicate the likelihood of a terrorist attack aimed at the Port or the proposed Project; therefore, the probability component as it relates to terrorism contains a considerable amount of uncertainty.

Application of Risk Principles

Terrorism risk can be generally defined by the combined factors of threat, vulnerability, and consequence. In this context, terrorism risk represents the expected consequences of terrorist actions taking into account the likelihood that these actions will be attempted, and the likelihood that they will be successful. Of the three elements of risk, the threat of a terrorist action cannot be directly affected by activities in the Port. The vulnerability of the Port and of individual cargo terminals can be reduced by implementing security measures. The expected consequences of a terrorist action can also be affected by certain measures, such as emergency response preparations.

3.7.2.5.2 Security Measures at the Port of Los Angeles

Numerous security measures have been implemented in the Port in the wake of the terrorist attacks of September 11, 2001. Federal, state, and local agencies, as well as private industry, have implemented and coordinated many security operations and physical security enhancements. The result is a layered approach to Port security that includes the security program of the LAHD.

Security Regulations

The Maritime Transportation Security Act (MTSA) of 2003 resulted in maritime security regulations in Title 33 CFR Parts 101-106. These regulations apply to cargo terminals in the Port. Title 33 Part 105 requires that cargo terminals meet minimum security standards for physical security, access control, cargo handling security, and interaction with berthed vessels. These regulations require that terminal operators submit a Facility Security Plan (FSP) to the Coast Guard Captain of the Port for review and approval prior to conducting cargo operations. The requirements for submission of the security plans became effective on December 31, 2003. Operational compliance was required by July 1, 2004.

The International Ship and Port Facility Security (ISPS) Code was adopted by the International Maritime Organization (IMO) in 2003. This code requires both ships and ports to conduct vulnerability assessments and to develop security plans for the purpose of: preventing and suppressing terrorism against ships; improving security aboard ships and ashore; and reducing risk to passengers, crew, and port personnel on board ships and in port areas, for vessels and cargo. The ISPS Code applies to all cargo vessels 300 gross tons or larger and ports servicing those regulated vessels, and is very similar to the MTSA regulations.

The USCG is responsible for enforcement of the MTSA and ISPS Code regulations discussed above. Due to the parallel nature of the MTSA and ISPS requirements, compliance with the MTSA is tantamount to compliance with the ISPS. If either the terminal or a vessel berthed at the terminal is found to be not in compliance with these security regulations, the USCG may not permit cargo operations, and the terminal and/or vessel operators may be subject to fines. In accordance with its responsibilities for land-based security under Title 33 CFR Part 105, the USCG may impose additional control measures related to security.

In July 2005, the Port Tariff was modified to require that all Port terminals subject to MTSA regulations fully comply with these regulations, and provide the Port with a copy of their approved FSP.

Vessel Security Measures

All cargo vessels 300 gross tons or larger that are flagged by IMO signatory nations adhere to the ISPS Code standards discussed above. These requirements include the following:

- Ships must develop security plans that address monitoring and controlling access; monitoring the activities of people, cargo, and stores; and ensuring the security and availability of communications.
- Ships must have a Ship Security Officer (SSO).
- Ships must be provided with a ship security alert system. These systems transmit ship-to-shore security alerts to a competent authority designated by the Flag State Administration, which may communicate the company name, identify the ship, establish its location, and indicate that the ship security is under threat or has been compromised. For the west coast, this signal is received by the Coast Guard Pacific Area Command Center in Alameda, California.
- International port facilities that ships visit must have a security plan, including focused security for areas having direct contact with ships.
- Ships may have certain equipment onboard to help maintain or enhance the physical security of the ship, including:
  - monitoring and controlling access;
  - monitoring the activities of people and cargo;
  - ensuring the security and availability of communications; and
  - completing a Declaration of Security signed by the FSO and SSO, which ensures that areas of security overlapping between the ship and facility are adequately addressed.

Vessels flagged by nations that are not IMO signatory are subject to special USCG vessel security boarding prior to entering port.

Security Credentialing

The Transportation Worker Identification Credential (TWIC) program is a Transportation Security Administration (TSA) and USCG initiative that will include issuance of a tamper-resistant biometric credential to maritime workers requiring unescorted access to secure areas of port facilities and vessels regulated under the MTSA. The TWIC program will minimize the potential for unauthorized handling of containers that contain hazardous materials, and will provide additional shoreside security at the terminal. In order to obtain a TWIC, an individual must successfully pass a security threat assessment conducted by TSA. This assessment will include a criminal history check and a citizenship or immigration status check of all applicants. The Port is currently involved in initial implementation of the TWIC program including a series of field tests at selected Port terminals.

Cargo Security Measures

U.S. Customs and Border Protection (CBP) is the federal agency with responsibility for the security of cargo being shipped into the United States. CBP is the lead agency for screening and scanning cargo that is shipped through the Port. CBP conducts several initiatives related to security of the supply chain. Through the Container Security Initiative (CSI) program, CBP inspectors pre-screen U.S.–bound marine containers at foreign ports prior to loading aboard vessels bound for U.S. ports. The Customs Trade Partnership Against Terrorism offers importers expedited processing of their cargo if they comply with CBP measures for securing their entire supply chain. Details of CBP cargo security programs can be found at the CBP website (http://cbp.gov/).

3.7.2.5.3 Existing Port Security Initiatives

The Port has a number of security initiatives under way, including significant expansion of the Port Police, which will result in additional police vehicles on the streets and police boats on the water. The initiatives in this area identified for implementation in fiscal year 2006 to 2007 include:

- expanding Port Police enhancement of its communications capabilities,
- establishing a 24-hour two-vessel presence,
- establishing a vehicle and cargo inspection team,
- establishing a Port Police substation in Wilmington,
- enhancing recruiting and retention of Port Police personnel,
- expanding Port Police communications capabilities to include the addition of dedicated tactical frequencies, and
- enhancing security at Port-owned facilities.

In the area of homeland security, the Port will continue to embrace technology while focusing its efforts on those areas of particular interest to the Port. Current Port homeland security initiatives include

- upgrading security at the World Cruise Center,
- expanding the Port's waterside camera system,
- establishing restricted areas for noncommercial vehicles and vessels,
- installing additional shoreside cameras at critical locations,
- working with TSA to implement the TWIC program,
- promoting increased scanning at overseas ports,
- updating long-range security plans for the Port,
- developing a security awareness training program, and
- enhancing outreach to constituents.

3.7.2.6 Tsunami Hazards

Tsunamis are gravity waves of long wavelength generated by a sudden disturbance in a body of water. Typically, oceanic tsunamis are the result of sudden vertical movement along a fault rupture in the ocean floor, submarine landslides or subsidence, or volcanic eruption, where the sudden displacement of water may set off transoceanic waves with wavelengths of up to 125 miles and with periods generally from 5 to 60 minutes.

Tsunamis are a relatively common natural hazard, although most of the events are small in amplitude and not particularly damaging. However, in the event of a large submarine earthquake or landslide, coastal flooding may be caused by either run-up of broken tsunamis in the form of bores and surges or by relatively dynamic flood waves. As has been shown historically, the potential loss of human life in the process can be great if such events occur in populated areas.

While the Safety Element of the City of Los Angeles General Plan identifies the proposed project site as being within an area "potentially impacted by a tsunami" (City of Los Angeles 1996b), detailed studies of tsunami risk within the Ports of Los Angeles and Long Beach indicate that the proposed project area is located such that waves under various scenarios would not reach above 2 feet and would not exceed deck elevations (Moffatt & Nichol 2007). Furthermore, the City of Los Angeles Tsunami Response Plan does not identify the proposed project area as part of the Tsunami Inundation Zone for San Pedro and the Harbor Area (City of Los Angeles 2007). Tsunamis and the hazard they pose to the proposed project area are further addressed in detail in Section 3.5, "Geology."

3.7.3 Applicable Regulations

Regulations applicable to the proposed Project are designed to govern hazardous materials and prevent their accidental release, and to ensure the security of the Port area. These regulations also are designed to limit the risk of upset during the use, transport, handling, storage, and disposal of hazardous materials. Additionally, numerous security measures have been implemented in the Port area in the wake of the terrorist actions of September 11, 2001. Federal, state, and local agencies, as well as private industry, have implemented and coordinated many security operations and physical security enhancements. The result is a layered approach to Port security that includes the security program of the LAHD. The proposed project area is located in close proximity to the Port but does not include any shipping projects. Although LAHD is responsible for the overall protection of the proposed project area, as well as reviewing tenant security operations, each tenant is individually and specifically required to comply with federal and state security and emergency regulations, which are enforced by agencies such as the USCG and LAFD. The proposed Project would be subject to numerous federal, state, and local laws and regulations, including, but not limited to, those described below.

3.7.3.1 Federal Regulations

3.7.3.1.1 Resource Conservation and Recovery Act of 1976 (42 USC Sections 6901–6987)

The goal of the Resource Conservation and Recovery Act of 1976 (RCRA) is the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements. The corresponding regulations in 40 CFR 260–299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

3.7.3.1.2 Department of Transportation Hazardous Materials Regulations (49 CFR Parts 100–185)

Department of Transportation (DOT) Hazardous Materials Regulations cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications), 180 (Packaging Maintenance), and 195 (Transportation of Hazardous Liquids by Pipeline) would all apply to the proposed Project and/or surrounding

operational activities. Part 173.120(a) defines a flammable liquid (Class 3) as liquid having a flash point less than 141°F. Materials with flash points above 141°F that are not intentionally heated and then offered for transport or transported at or above their flash point are not considered a flammable liquid. Materials with a flash point above 141°F and below 200°F are considered combustible liquids. Materials transported to/from and then stored at the Marine Tank Farm are raw gas oil and hydro-treated gas oil with flashpoints at 151°F and 180°F, respectively.

Enforcement of these DOT regulations is shared by each of the following administrations under delegations from the Secretary of the DOT:

- Research and Special Programs Administration (RSPA)—Responsible for container manufacturers, reconditioners, and retesters and shares authority over shippers of hazardous materials.
- Federal Highway Administration (FHWA)—Enforces all regulations pertaining to motor carriers.
- Federal Railroad Administration (FRA)—Enforces all regulations pertaining to rail carriers.
- Federal Aviation Administration (FAA)—Enforces all regulations pertaining to air carriers.
- Coast Guard–Enforces all regulations pertaining to shipments by water

Additionally, the Pipeline Hazardous Materials Safety Administration acting through the Office of Pipeline Safety under the DOT administers the national regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline.

3.7.3.1.3 Emergency Planning and Community Right-to-Know Act (42 USC 11001 et seq.)

Also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), the Emergency Planning and Community Right-to-Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. To implement EPCRA, Congress required each state to appoint a State Emergency Response Commission (SERC). The SERCs were required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee (LEPC) for each district. EPCRA provides requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.

3.7.3.1.4 U.S. Coast Guard, Navigation and Navigable Waters (33 CFR)

The USCG, through Title 33, "Navigation and Navigable Waters," is the federal agency responsible for vessel inspection, marine terminal operations safety, coordination of federal responses to marine emergencies, enforcement of marine pollution statutes, marine safety (navigation aids, etc.), and operation of the National Response Center for spill response, and is the lead agency for offshore spill response. The USCG is also responsible for reviewing marine terminal operations manuals and issuing Letters of Adequacy upon approval.

There are several sections of 33 CFR specifically applicable to the proposed project components. These include Sections 6, 101 to 106, and 165. 33 CFR 6 defines the security zones within the harbor. *Security zone* means all land, water, or land and water designated by the USCG Captain of the Port and deemed necessary to prevent damage to any vessel or waterfront facility and safeguard ports, harbors, territories, or waters of the U.S. To ensure the security of waterfront facilities at the Port, the USCG Captain of the Port may prescribe conditions and restrictions relating to the safety of waterfront facilities and vessels in port found necessary under existing circumstances.

3.7.3.1.5 Oil Pollution Act of 1990 (OPA 90)

The most recent Act to address spill prevention and response, OPA 90, was enacted to expand prevention and preparedness activities, improve response capabilities, ensure that shippers and oil companies pay the costs of spills that do occur, and establish an expanded research and development program. OPA 90 also establishes a $1 billion Oil Spill Liability Trust Fund, funded by a tax on crude oil received at refineries. A Memorandum of Understanding (MOU) was established to divide areas of responsibility. The USCG is responsible for tank vessels and marine terminals, the EPA for tank farms, and the RSPA for pipelines. Each of these agencies has developed regulations for their area of responsibility. All facilities and vessels that have the potential to release oil into navigable waters are required by OPA 90 to have up-to-date oil spill response plans and to submit such to the appropriate federal agency for review and approval. Of particular importance in OPA 90 is the requirement for facilities and vessels to demonstrate that they have sufficient response equipment under contract to respond to and clean up a worst-case spill.

3.7.3.2 State Regulations

3.7.3.2.1 Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5)

The CalEPA DTSC is authorized by the U.S. EPA to enforce and implement federal hazardous materials laws and regulations. Most state hazardous materials regulations

are contained in Title 22 of the CCR. DTSC provides cleanup and action levels for subsurface contamination; these levels are equal to, or more restrictive than, federal levels. DTSC acts as the lead agency for some soil and groundwater cleanup projects, and has developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

DTSC is responsible for the enforcement of the Hazardous Waste Control Law, which implements the federal RCRA cradle-to-grave waste management system in California. California hazardous waste regulations can be found in Title 22, Division 4.5, "Environmental Health Standards for the Management of Hazardous Wastes."

3.7.3.2.2 Hazardous Material Release Response Plans and Inventory Law (California Health and Safety Code, Chapter 6.6)

This state right-to-know law requires businesses to develop a Hazardous Material Management Plan or a business plan for hazardous materials emergencies if they handle more than 500 pounds, 55 gallons, or 200 cubic feet of hazardous materials. In addition, the business plan would include an inventory of all hazardous materials stored or handled at the facility above these thresholds. This law is designed to reduce the occurrence and severity of hazardous materials releases. The Hazardous Materials Management Plan or business plan must be submitted to the Certified Unified Program Agency (CUPA), which, in this case, is LACFD. . In 1997, Health Hazardous Materials Division (HHMD) within the LACFD became a CUPA to administer the following programs within Los Angeles County: the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program (Cal-ARP), the Aboveground Storage Tank Program, and the Underground Storage Tank Program. The state has integrated the federal EPCRA reporting requirements into this law; once a facility is in compliance with the local administering agency requirements, submittals to other agencies are not required.

3.7.3.2.3 Aboveground Petroleum Storage Act (California Health and Safety Code, Division 20, Chapter 6.67)

The owner or operator of a storage tank at a tank facility is required to prepare a spill prevention control and countermeasure plan. Periodic inspections of the storage tank by a qualified inspector is required to assure compliance with Part 112 of Subchapter D of Chapter I of Title 40 of the CFR. The Unified Program Agency (UPA) is required to inspect each storage tank or a representative sampling of the storage tanks at each tank facility that has a storage capacity of 10,000 gallons or more of petroleum. The purpose of the inspection is to determine whether the owner or operator is in compliance with the spill prevention control and countermeasure plan requirements of this chapter. The owner or operator of a tank facility is required by

law to immediately, upon discovery, notify the Office of Emergency Services and the UPA using the appropriate 24-hour emergency number or the 911 number, as established by the UPA, or by the governing body of the UPA, of the occurrence of a spill or other release of one barrel (42 gallons) or more of petroleum that is required to be reported pursuant to subdivision (a) of Section 13272 of the Water Code.

3.7.3.2.4 California Labor Code (Division 5; Part 1, 6, 7 and 7.5)

The California Labor Code is a collection of regulations that include the regulation of the workplace to assure appropriate training on the use and handling of hazardous materials and the operation of equipment and machines which use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5 ensures employees that are in charge of the handling of hazardous materials are appropriately trained and informed of the materials with which they handle. Division 5, Part 6 governs the operation and care of hazardous material storage tanks and boilers. Division 5, Part 7 ensures employees who work with volatile flammable liquids are outfitted in appropriate safety gear and clothing. Division 5, Part 7.5, otherwise referred to as the California Refinery and Chemical Plant Worker Safety Act of 1990, was enacted to prevent or minimize the consequences of catastrophic releases of toxic, flammable, or explosive chemicals. The establishment of process safety management standards is intended to eliminate, to a substantial degree, the risks to which workers are exposed in petroleum refineries, chemical plants, and other related manufacturing facilities.

3.7.3.2.5 California Pipeline Safety Act of 1981

This Act gives regulatory jurisdiction to the California State Fire Marshal (CSFM) for the safety of all intrastate hazardous liquid pipelines and all interstate pipelines used for the transportation of hazardous or highly volatile liquid substances. The law establishes the governing rules for interstate pipelines to be the Federal Hazardous Liquid Pipeline Safety Act and federal pipeline safety regulations.

California Government Code sections 51010 through 51018 provide specific safety requirements that are more stringent than the Federal rules. These include:

- periodic hydrostatic testing of pipelines, with specific accuracy requirements on leak rate determination;
- hydrostatic testing by state-certified independent pipeline testing firms;
- pipeline leak detection; and
- reporting all leaks.

The Code requires that pipelines include leak prevention and cathodic protection, with acceptability to be determined by the CSFM. All new pipelines must be

designed to accommodate the passage of instrumented inspection devices, i.e., smart pigs.

3.7.3.2.6 Oil Pipeline Environmental Responsibility Act (Assembly Bill 1868)

This Act requires every pipeline corporation qualifying as a public utility and transporting crude oil in a public utility oil pipeline system to be held strictly liable for any damages incurred by "any injured party which arise out of, or are caused by, the discharge or leaking of crude oil or fraction thereof...." The law applies only to public utility pipelines for which construction would be completed after January 1, 1996, or that part of an existing utility pipeline that is being relocated after the above date and is more than 3 miles in length.

3.7.3.2.7 California Code of Regulations, Title 8—Industrial Relations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the federal OSHA 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. These standards would be applicable to both construction and operation. Regulations enforced through Cal OSHA pertaining to asbestos-containing material, liquefied petroleum gas, storage tanks, and boilers are listed in CCR Title 8, Chapter 3.2.

3.7.3.2.8 Other State Requirements

California regulates the management of hazardous wastes through Health and Safety Code Section 25100 et seq.; CCR Title 22, Division 4.5, "Environmental Health Standards for the Management of Hazardous Wastes"; and CCR Title 26, "Toxics." The state regulates air particulates during construction, demolition, and operation through the SCAQMD rules.

3.7.3.3 Regional and Local

3.7.3.3.1 Port Master Plan

Intended to guide development within the Port, the PMP was certified in 1979 and was most recently revised in December 2003. The PMP was certified by the California Coastal Commission and approved by the Board of Harbor

Commissioners. The PMP divides the Port into nine individual planning areas. The proposed project site is primarily located in PA5 (Wilmington District), and the Waterfront Red Car Line and pedestrian corridor of the proposed Project skirt the boundaries of PA4 (West Basin) and PA3 (West Turning Basin). The PMP identifies land use compatibility guidelines for PAs5, 4, and 3, as well as short- and long-term plans for these areas.

See Section 3.8, "Land Use and Planning," for a detailed discussion regarding the PMP and its applicability to the proposed Project.

3.7.3.3.2 Port Risk Management Plan

The RMP, an element of the PMP, was adopted in 1983, pursuant to the California Coastal Act of 1976 (LAHD 1983). The purpose of the RMP is to provide siting criteria related to vulnerable resources, and handling and storage guidelines for potentially hazardous liquid bulk materials. Hazard liquid bulk materials are defined in the RMP as

> …a cargo moved through the Ports in liquid bulk form, which is either flammable, explosive, or produces a flammable, toxic, or suffocating gas if released. Such cargos include crude oil, petroleum products, and many liquid chemicals. These do not include cargos packaged in drums, portable tanks as defined by the department of Transportation, Code of Federal Regulation, or other portable containers.

Vulnerable resources are described as high density populations in the Port and adjacent areas and critical impact facilities in the Port, which if damaged or destroyed would have a significant impact on port operations. There are four types of vulnerable populations: residential, recreational, visitor, and the working populations at the Port). Working populations in the Port are protected under the specific risk management plans and emergency policies related to the handling, storage, and use of hazardous materials of the businesses that employ them; therefore, for the purposes of the proposed Project the focus will be on recreating and visiting populations.

The RMP and supporting documents outline the criteria to determine whether a facility is considered hazardous and the appropriate methodology to calculate the hazardous footprint if needed. The hazardous footprint of a hazardous facility is defined by the PMP RMP as the area wherein a specified level of adverse effect would be exceeded against a specified vulnerable resource.

The siting criteria for locating vulnerable resources and hazardous facilities include the following:

- no new vulnerable resources will be permitted to be located within the hazardous footprint areas of existing or approved facilities handling hazardous liquid bulk cargoes except where overriding considerations apply;

- no new hazardous cargo facility will be permitted which creates an overlap of an existing or approved vulnerable resource except where overriding considerations apply;
- a modification or expansion that extends the hazardous footprint overlap of vulnerable resources will not be allowed except where overriding considerations apply; and
- a modification that extends the life of the facility is permitted. However, the facility should meet with the Port to see what impact the RMP has on the facility. The facility should consider this plan before making any such modifications.

The RMP provides guidance for existing activities and future development of the Port to minimize or eliminate impacts on vulnerable resources from accidental releases. The overall policy of the Risk Management Plan has as its objective to minimize or eliminate the overlaps of hazardous footprints and areas of substantial residential, visitor, recreational, and high density working populations and direct high economic impact facilities identified as hazardous.

3.7.3.3.3 Los Angeles Municipal Code (Fire Protection—Chapter 5, Section 57, Divisions 4 and 5)

These portions of the municipal code regulate the construction of buildings and other structures used to store flammable hazardous materials and the storage of these same materials. These sections ensure that the business is properly equipped and operates in a safe manner and in accordance with all applicable laws and regulations. These permits are issued by LAFD.

3.7.3.3.4 Los Angeles Municipal Code (Public Property—Chapter 6, Article 4)

This portion of the municipal code regulates the discharge of materials into the sanitary sewer and storm drains. It requires the construction of spill-containment structures to prevent the entry of forbidden materials, such as hazardous materials, into sanitary sewers and storm drains.

3.7.3.3.5 Other Regional and Local Requirements

The Safety Element of the City of Los Angeles General Plan addresses the issue of protection of residents from unreasonable risks associated with natural disasters (e.g., fires, floods, and earthquakes). The Safety Element provides a contextual framework for understanding the relationship among hazard mitigation, response to a natural disaster, and initial recovery from a natural disaster.

3.7.4 Impact Analysis

3.7.4.1 Methodology

3.7.4.1.1 General

CEQA guidelines require identifying any adverse change in any of the physical conditions in the area affected by the proposed Project, including a change in the probability of spills or releases. The potential impacts from proposed project–related emergency preparedness procedures and releases of hazardous materials into the environment, which could affect public health and safety, are qualitatively evaluated using the context of existing federal, state, regional, and local regulations and policies.

No container-handling facilities would be associated with the construction or operation of the proposed Project, and no hazardous materials would be transported via containers. No impacts from container handling would occur as a result of the construction or operation of the proposed Project. Therefore container-handling facilities are not discussed in this section.

The LADWP Marine Tank Farm site handles and stores gas oils. Based on the Material Safety Data Sheet (MSDS) provided by Valero, the gas oils have flashpoints above 140 degrees (F) and are not considered a hazardous commodity for flammability. However, the MSDS information states that raw gas oil has a National Fire Protection Association (NFPA) health hazard rating of 4, based on the presence of hydrogen sulfide, potentially requiring a toxic vapor cloud footprint assessment. The MSDS indicates that 1.2% (by weight) of the raw gas oil contains hydrogen sulfide (Cornwell pers. comm. 2008a, 2008b). However, this is not in the form of free hydrogen sulfide molecules. Rather, the hydrogen sulfide, which is commonly present in crude and gas oils is bound to the hydrocarbon molecules and will not readily evaporate as a hydrogen sulfide gas cloud from a pool of gas oil (Cornwell, pers. comm. 2008a, 2008b). Therefore, due to the low concentration of hydrogen sulfide in the raw gas oil (1.2%) and the fact that hydrogen sulfide is bound to the hydrocarbon and would not generate a hydrogen sulfide gas in such a concentration sufficient enough to cause a health hazard, no toxic vapor cloud footprint is required (Cornwell, pers. comm. 2008a, 2008b). As such, no hazard footprints are required for the storage and handling of gas oils at the LADWP Marine Tank Farm site and they are therefore not discussed in this section.

3.7.4.1.2 Upset Due to Terrorism

Analysis of risk of upset is based primarily on potential frequencies of occurrence for various events and upset conditions as established by historical data. The climate of the world today has added an additional unknown factor for consideration, i.e., terrorism. There are limited data available to indicate the likelihood of a terrorist attack aimed at the Port or the proposed Project; therefore, the probability component

of the analysis described above contains a considerable amount of uncertainty. Nonetheless, this fact does not invalidate the analysis contained herein. Terrorism can be viewed as a potential trigger that could initiate events described in this section such as hazardous materials release and/or explosion. The potential impact of those events, once triggered by whatever means, would remain as described herein.

3.7.4.1.3 Crude Pipeline Hazard Scenarios

Pipeline Ruptures: A pipeline rupture is defined as a spill greater than 100 bbls (42 gallons equals 1 bbls) of existing crude pipelines. Ruptures have significantly lower frequency rates and higher volumes of spills than *leaks*.

Likely causes of ruptures are earthquakes, corrosion, and third-party damage. The full rupture scenario assumes a total rupture of a pipeline, resulting in drainage of the pipeline content between the two closest valves.

The frequency of a *release* (leak or rupture) is primarily a function of the construction of the pipeline, the maintenance and operational practices, and third-party damage. The volume of the subsequent release is a function of the training of the operators as well as the design, construction, and maintenance of the leak detection system. (Pacific L.A. Marine Terminal LLC Crude Oil Terminal Draft SEIS/SEIR April 2008).

Pipeline Leaks. Pipeline leaks (spills less than 100 bbls) are similar to ruptures described above, except that they address smaller sized releases from the pipeline. This distinction has been made between leaks and ruptures to account for the different failure frequencies that exist between ruptures and leaks. Pipeline leaks are most commonly the result of corrosion, erosion, or third-party damage to the pipeline.

3.7.4.1.4 Harbor Generating Station

The HGS includes two liquid bulk storage sites, with three storage tanks, thathandle and store diesel oils. One is at the HGS, located west of Fries Avenue; the other is located at Fries Avenue and A Street, north of the Peaker Units. The methodology for analyzing the impacts of these two storage sites includes the postulated accidents and assumes the spilling of diesel oil into the diked area and a subsequent ignition of the pool area. The injury exposure level of 1,600 bpu per hour per square foot was used to determine the footprint associated with radiant heat from a diesel spill and ignition in the diked area.

HGS also includes the storage of aqueous ammonia. A risk management analysis was conducted by Quest Consultants, Inc., and Port Planning to determine the offsite consequences of a release of aqueous ammonia from the existing HGS and its relationship to the proposed Project (Appendix G-1). Quest performed consequence modeling for two postulated cases based on the probability scenarios using EPA's

RMP Offsite Consequence Analysis Guidance for toxic releases and explosions and Quest's own consequence modeling software, CANARY. The consequence modeling calculated the downwind dispersion of the ammonia vapors released during the two postulated cases and identified the footprint of the ammonia vapors.The two postulated accidents at the facility are:

- a hose failure during transfer operations from a tank truck to the storage tanks; and
- spillage of aqueous ammonia at the storage tank site covering the impoundment area.

These two postulated accidents are considered possible but unlikely. The first postulated accident assumed a hose failure during transfer operations resulting in a spill of not more than 200 gallons. The transfer site contains a concrete pad area of approximately 1,000 square feet, which drains to a sump. Due to the sloped sides of the concrete containment area, the 200 gallon spill would cover approximately 1/3rd of the concrete pad, resulting in a vapor-producing area of approximately 325 square feet. This is a reasonable postulated accident for a truck transfer operation due to pressure change alarm systems on the delivery trucks and a closed loop internal valve system on the trucks that allow for the automatic shut off of transfer operations should a hose rupture occur.

The endpoints for the ammonia exposure are similar to those used in SCAQMD's EIR for the Peaker Plant project. EPA RMP guidance was used to determine the endpoint of explosions and to estimate the toxic impact of potential aqueous ammonia releases. The distance that has to be traversed from the center of the upset event to reach the endpoint was calculated for each case. This distance represents the maximum separation required to reach the edge of the critical zone of the impact. The edge of the critical zone is the outer limit of potentially serious injuries. For aqueous ammonia, the EPA endpoint for exposure is the distance from the spill that is required to reduce the ammonia concentration to 200 ppm. Furthermore, the EPA has identified that for toxic compounds, such as ammonia, the Emergency Response Planning Guidelines (ERPG) (AIHA/ORC 1998 in SCAQMD 2001) assign these compounds ERPG Level II status, which is defined as:

> The maximum airborne concentration (i.e., 200 ppm for ammonia) **below** which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.

Therefore, the toxic endpoint of 200 ppm for aqueous ammonia was used to determine the area of impact associated with the two postulated aqueous ammonia accidents at the HGS for the proposed Project.

The two postulated accidents analyzed by Quest Consulting Inc., for the proposed project differ significantly from that postulated in the 2001 SCAQMD's EIR. That document assumed an unconfined ammonia spill of the entire capacity of the tanker truck (5,000 gallons). Such a spill would create a pool area of approximately 20,300 square feet. It is unreasonable to assume such an accident occurring at the HGS, as it

would require a catastrophic failure of the delivery truck tank. Additionally, this accident did not consider the containment area, which drains to a sump, thereby limiting the area that would be producing vapors. Therefore, SCAQMD's scenarios are considered remote and highly unlikely, and were not considered as part of the proposed Project analysis due to the speculative nature of such occurrences. However, the proposed Project analysis contained herein and the 2001 SCAQMD EIR used the same ammonia concentration threshold of 200 ppm per the Emergency Response Planning Guidelines (EPRG-2). The results of the consequence modeling as it relates to the proposed Project are further discussed under Impacts RISK-1b, and RISK-5 below.

Probability of Upset Events

Pipeline Failure Rates

While pipelines have historically had one of the lowest failure rates of any mode of transportation, there is still some level of risk that a pipeline could leak or rupture. In order to estimate the probability of such an event, historical data for operating liquid pipelines have been used to estimate the probability of a leak or rupture for the existing pipeline system. Historically, spills from pipelines have been attributed to a number of different causes, including corrosion, defects in material or welding, damage from third-party interference, natural hazards such as earthquakes or landslides, and operational errors.

Information on the number and causes of pipeline spills in the U.S. greater than 50 barrels in size is available from the DOT Office of Pipeline Security (OPS). These data were obtained for spills from 1985 to 2000. Information is available from the OPS for crude oil pipelines only, as well as for all liquid pipelines. In the years since 1985, crude oil made up 47 to 51% of the liquid spilled from pipelines, and petroleum products made up 47 to 55% of the total spilled. The primary causes of incidents with the crude oil pipelines have been corrosion (between 26 and 60% of the failures) and outside force damage or third-party damage (between 14 and 42% of the total failures).

The California State Fire Marshal publishes an analysis of leak information from the 7,800 miles of hazardous liquid pipelines within California for the years 1981 through 1990 (CSFM 1993). This study enables pipeline failure rates to be adjusted based on variables such as pipeline age, diameter, operating temperature, material of construction and coating type, corrosion protection type, inspection schedule, leak detection system, as well as spill cause. The study found that external corrosion was the major cause of pipeline leaks, causing about 59% of spills, followed by third-party damage at 20%. Older pipelines and those that operate at higher temperatures had significantly higher failure rates. As the OPS pipeline data are only for larger releases, the CSFM report has been used in this analysis.

Fire Hazards

Crude oil fire hazards strongly depend on the type or blend of crude oil being shipped through the pipeline and the conditions at the spill site. Fire hazards associated with light and heavy crude oils are quite different, and the same oil type and volume could cause drastically different consequences based on site conditions. Heavy crude oil mainly consists of heavy hydrocarbon components with low flammability, and there is some risk associated with the ignition of spilled oil and the resulting fire. While a crude oil fire could theoretically occur at any place where a spill occurs, the occurrence of a heavy crude oil fire is likely to be limited to the pump stations or areas where a significant ignition source can be found.

For fire hazards, the concern is intensity of thermal radiation and its effects on public health and safety. Data on the exposure time necessary to reach pain thresholds indicates that relatively high thermal radiation levels can be tolerated without significant pain or injury. Therefore, there would usually be sufficient time for people to escape the immediate area of the fire before significant physical injury is suffered.

Historic statistics demonstrate that while serious injury and/or death are rare in pipeline incidents, both have occurred and continue to pose a potential risk to human health and public safety. The DOT OPS database indicates that, from 1985 to September 2004, 1 fatality and 28 injuries resulted from 1,487 recorded crude oil pipeline incidents in the U.S. From 1968 to 1984, crude oil pipeline incidents resulted in 8 fatalities and 12 injuries. Furthermore, the California Office of the State Fire Marshall California Incident Reporting System (CIRS) reported that between 2003 and 2007 there were two fires caused by the property use of pipeline, powerline, or other utility right of way (http://osfm.fire.ca.gov/cairs/cairs_nfirsreports.php).

3.7.4.1.5 Analytical Framework

According to the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006), the determination of significance for emergency preparedness and human health hazards would be made on a case-by-case basis, considering the following factors:

- regulatory framework for emergency preparedness and the health hazard(s);
- degree to which the project may require a new, or interfere with an existing, emergency response or evacuation plan and the severity of the consequences;
- degree to which project design will reduce the frequency or severity of a potential accidental release of a hazardous substance or explosion;
- probable frequency and severity of consequences to people or property as a result of a potential accidental release of a hazardous substance or explosion;
- probable frequency and severity of consequences to people from exposure to health hazard(s); and

- degree to which the project design would reduce the frequency of exposure or severity of consequences of exposure to health hazard(s).

3.7.4.2 Thresholds of Significance

The proposed Project would have a significant impact related to emergency preparedness and the release of hazardous material(s) if it would:

RISK-1: Not comply with applicable federal, state, regional, and local security and safety regulations, and Port policies guiding Port development;

RISK-2: Substantially interfere with an existing emergency response or evacuation plan or require a new emergency or evacuation plan, thereby increasing the risk of injury or death;

RISK-3: Substantially increase the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action; and,

RISK-4: Substantially increase the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications.

RISK-5: Introduce the general public to hazard(s) defined by the EPA and the Port RMP associated with offsite facilities.

3.7.4.3 Impacts and Mitigation

3.7.4.3.1 Construction Impacts

Impact RISK-1a: Construction of the proposed Project would comply with applicable federal, state, regional, and local security and safety regulations, and Port policies guiding Port development.

The construction of the proposed Project would potentially result in a conflict with applicable safety and security regulations and policies guiding the development within the Port if safety and security regulations are not followed during:

- general construction throughout the proposed project area during Phase I and Phase II,
- the decommission of the LADWP Marine Tanks during Phase I,
- construction adjacent to the Harbor Generating Station, and

- future relocation of the Marine Tank Farm to a feasible site such as the Olympic Tank site.

These proposed project components are evaluated for their consistency with the applicable regulations and policies guiding development within the Port below.

General Construction in the Proposed Project Area Phase I and Phase II

As discussed in Section 3.7.3, several regulations cover the construction that would occur in the proposed Project: RCRA, Hazardous and Solid Waste Act (HSWA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Cal. Code Reg. Titles 22 and 26, and the California Hazardous Waste Control Law. These would govern proper containment, spill control, and disposal of hazardous waste generated during demolition and construction. Implementing increased inventory accountability, spill prevention controls, and waste disposal controls associated with these regulations would limit both the frequency and severity of potential hazardous materials releases during demolition and construction. Potential releases of hazardous substances during demolition and/or construction would be addressed through EPCRA, which is administered in California by SERC and the Hazardous Material Release Response Plans and Inventory Law.

In addition, demolition and construction would be completed in accordance with the Los Angeles Municipal Fire Code, which regulates the construction of buildings and other structures used to store flammable hazardous materials, and the Los Angeles Municipal Public Property Code, which regulates the discharge of materials into the sanitary sewer and storm drain. The latter requires the construction of spill-containment structures to prevent the entry of forbidden materials, such as hazardous materials, into sanitary sewers and storm drains. LAHD maintains compliance with these federal, state, and local laws through a variety of methods, including internal compliance reviews, preparation of regulatory plans, and agency oversight. These regulations must be adhered to during design and construction of the proposed Project.

Standard Best Management Practices (BMPs) would also be used during construction and demolition activities to minimize runoff of contaminants and air pollutants, in compliance with the State General Permit for Stormwater Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and the project-specific Stormwater Pollution Prevention Plan (SWPPP) (see Section 3.14, "Water Quality, Sediments, and Oceanography," for more information). Construction/demolition activities would be conducted using BMPs in accordance with City guidelines, as detailed in the *Development Best Management Practices Handbook* (City of Los Angeles 2004a), and the *LAHD Sustainable Construction Guidelines* (LAHD 2008). During construction, the contractor would employ management controls to minimize potential impacts presented by the use of hazardous materials during the construction phase of the proposed project. These controls include: (1) developing required management plans, e.g., a Spill Prevention, Control, and Countermeasure (SPCC) Plan; (2) secondary containment; (3) separate storage of incompatible materials; and (4) proper training of personnel.

In addition, construction personnel would be trained in safety and defensive emergency response procedures. Construction personnel would also receive hazardous-waste-related training that focuses on recognition of potentially hazardous materials that may be encountered during subsurface excavations for proposed structures. If such hazardous material is suspected, contingency procedures would be followed to protect worker safety and public health. All vehicles and construction equipment would be inspected to ensure that no fluids are leaking (e.g., oil, hydraulic fluid, lubricants, or brake fluid) and that all fuels and fluids are stored in proper, clearly labeled containers. Hazardous materials that must be disposed of would be disposed of as hazardous waste in accordance with the appropriate regulations for storage, transportation, and disposal of hazardous waste.

Furthermore, prior to construction, a Solid Waste Management Plan per state regulations would be prepared and approved. During construction, the onsite management and offsite disposal procedures for solid waste would be adhered to as defined in the Solid Waste Management Plan for the proposed project. Waste would be stockpiled temporarily before disposal off site. Hazardous wastes generated during construction would be collected in hazardous waste accumulation containers near the point of generation and moved daily to the construction contractor's 90-day hazardous waste storage area on site. The accumulated waste would be delivered to or collected by an authorized waste management facility.

Decommissioning of LADWP Marine Tanks

Phase I of the proposed Project includes the removal of the three LADWP Marine tanks and associated petroleum pipelines located at 130 W. A Street. There would be a number of proposed project elements constructed under Phase I of the proposed Project that would be operational before or during the removal of the LADWP Marine Tanks. The proposed project elements that would be operational near the Marine Tanks include:

- the pedestrian bridge to the east of the tanks connecting the intersection of Harry Bridges and Avalon Boulevards to the waterfront
- the southern part of the elevated park/land bridge
- the commercial uses
- the restaurant
- the observation tower
- the waterfront promenade

The contents of the tanks and associated pipelines would be drained through the oil pipe distribution system prior to demolition and/or removal. Any petroleum product remaining in the system after this would be residual, and would be removed as contaminated waste, not as cargo. The removal of the LADWP Marine tanks and associated onsite petroleum piping would include the submittal of a work plan to the California State Fire Marshall (CSFM) and other applicable agencies, as appropriate. The onsite piping to be removed would be drained of all fluids, cleaned, flushed, and then capped. The off-site petroleum pipeline infrastructure along Fries and Water

Streets would not be removed, drained, or altered under the proposed Project. Materials from the tanks and the piping would be characterized for disposal and disposed of at an appropriately certified hazardous waste facility. Testing would occur prior to the demolition of the tanks and the removal of the pipelines associated with the tanks and prior the removal. Should contamination be found, appropriate remediation would occur prior to or concurrent with construction, under approval of the appropriate oversight agency. (See Appendix F, Ninyo & Moore's technical study, for additional details regarding the abandonment and removal of the tanks.) The removal of the tanks and associated pipelines would be required to comply with all state and federal regulations discussed above under general construction.

Construction Adjacent to the Harbor Generating Station

Under the proposed Project, there would be no physical changes made to either HGS or the Peaker Units. Construction traffic would be planned for in accordance with the Work Area Traffic Control Handbook (WATCH) to coordinate with LAFD, LAPD, and Port Police prior to commencement of construction activities. This manual will identify alternative response routes, ensuring continuous adequate emergency vehicular access and staging of construction would take place on site. No impacts related to a conflict with existing safety or security plans or policies would occur.

Olympic Tank Site

The proposed Project includes the potential use of the Olympic Tank site by LADWP and Valero after the demolition and removal of the existing LADWP Marine Tanks in Phase II. The use of the Olympic Tank site would require modification and potential construction to allow for use by LADWP and/or Valero. This modification and/or construction would be required to follow all state and federal regulations related to the handling, storage, and use of hazardous facilities described above under the general construction. A separate CEQA review would be needed to further evaluate the use of the Olympic Tank site prior to any modification and/or construction.

Impact Determination

Construction and demolition for the proposed Project would involve the handling and use of hazardous materials. However, the consequences of construction-related spills are generally reduced in comparison to other accidental spills and releases because the amount of hazardous material released during a construction-related spill is small; volume in any single piece of construction equipment is generally less than 50 gallons, and fuel trucks are limited to 10,000 gallons or less. Construction-related spills of hazardous materials are not uncommon, but the enforcement of construction and demolition standards, including BMPs by appropriate local and state agencies would minimize the potential for an accidental release of petroleum products and/or hazardous materials or explosions during construction.

Additionally, the demolition and removal of the three LADWP Marine Tanks and associated pipelines would comply with all appropriate safety state and federal regulations and would include the submittal of a work plan to the CSFM and other

applicable agencies, as appropriate. The demolition of the tanks and associated pipelines would not violate the PMP RMP, as these liquid bulk fuel tanks are not defined as hazardous under the PMP RMP and supporting documents. Therefore, the demolition and removal of the tanks during the operation of Phase I proposed project elements would comply with the PMP RMP. See Section 3.7.4.1.4 and Impacts RISK-1b and RISK-5 for additional discussion of the operational analysis of the proposed Project under the PMP RMP.

Proper adherence to the WATCH Manual requirements and the submittal of a construction traffic control plan as well as approval of an onsite staging area would ensure no impact would occur on safety and security regulations and policies from the proposed Project's proximity to the Harbor Generating Station or Peaker Units.

Finally, the modification and/or construction associated with the Olympic Tank site would also be required to follow all applicable state and federal regulations; however, additional CEQA analysis would be conducted prior to any modification and/or construction on this site.

Therefore, because construction of the proposed Project would comply with applicable security and safety regulations and/or Port policies guiding Port development, construction impacts under threshold RISK-1 would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact RISK-2a: Construction of the proposed Project would not substantially interfere with an existing emergency response or evacuation plan or require a new emergency or evacuation plan, thereby increasing the risk of injury or death.

Emergency response and evacuation planning is the responsibility of the Port of Los Angeles' Homeland Security Division, LAPD, LAFD, and USCG. The proposed project construction and demolition activities would be subject to emergency response and evacuation systems implemented by the LAPD and LAFD. Prior to commencement of construction/demolition activities, standard protocol would be followed, and all plans would be reviewed by LAFD to ensure adequate emergency access is maintained throughout the process.

During construction and/or demolition activities, as required by the municipal fire code, LAFD would require that adequate vehicular access to the proposed project area be provided and maintained. This would be ensured and enforced via the construction traffic control plan (i.e., Watch Manual) required for the proposed

Project (for further discussion of the construction traffic control plan, refer to Section 3.11, "Transportation and Circulation—Ground and Marine," Impact TC-1a and Mitigation Measure TC-1).

Additionally, LAFD would be responsible for waterside first response in the event of an emergency. The USCG, Port Police, and LAPD would also support LAFD in the event of a waterside emergency.

Impact Determination

Proposed project contractors would be required to adhere to all Homeland Security, LAPD, and LAFD emergency response and evacuation regulations discussed in the existing setting section above in Section 3.7.2.4, "Existing Public Emergency Services," ensuring compliance with existing emergency response plans. Therefore, construction/demolition activities would not substantially interfere with an existing emergency response or evacuation plan or increase the risk of injury or death. Construction Impact RISK-2a would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact RISK-3a: Construction of the proposed Project would not substantially increase the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action.

The proposed Project could result in a substantial increase in the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action during the following activities:

- general construction throughout the proposed project area Phase I and Phase II, and,
- the decommissioning of the LADWP Marine Tanks Phase I.

These project components are evaluated below for their ability to substantially increase the likelihood of sensitive receptors being exposed to a significant health hazard through a spill, release, or explosion due to a terrorist action during construction. Elements of Phase I would be completed by 2013, which would bring sensitive receptors to the proposed project site during on-going construction activities for the late Phase I and Phase II construction.

General Construction in the Proposed Project Area Phase I and Phase II

Construction and demolition activities for the proposed Project would involve the handling and use of certain amounts of hazardous materials including vehicle fuels and other flammable chemicals. The potential consequence of a terrorist action on such activities would mainly concern relatively small potential targets such as construction vehicles and elements undergoing construction. Fuel volume in any single piece of construction equipment is generally less than 50 gallons and fuel trucks are limited to 10,000 gallons or less. The enforcement of construction and demolition standards, including BMPs by appropriate local and state agencies (i.e., LAPD, Port Police, LAFD, LAHD), would minimize the potential for a spill, release, or explosion of hazardous materials due to a terrorist action. Furthermore, the enforcement of these standards would reduce the impact should a spill, release, or explosion of hazardous material occur due to a terrorist action.

Some elements of Phase I would be complete while construction of late Phase I and Phase II elements would be ongoing. Sensitive receptors, such as Phase I park patrons, near the LADWP Marine Tank Farm or general construction activities would experience obtrusive noise and odors. However, risk associated with the general construction activities would be minimal as potential targets for terrorist actions would have very little effect (e.g. damage, harm, or high profile status) if such an event were to occur during the construction of industrial buildings or the park. One element, the observation tower, can be speculatively stated as being a higher profile target, but its relative small scale and limited capacity would substantially reduce its damage effect as a terrorist target. Consequences associated with a terrorist attack during general construction would be low, and impacts related to the vulnerability of the proposed Project during construction and consequences of having sensitive receptors on site during construction activities would be negligible because the damage and general effect would be limited. Impacts related to the likelihood of sensitive receptors being exposed to a significant health hazard through a spill, release, or explosion due to a terrorist action during general construction during Phase I and Phase II would be less than significant.

Decommissioning of LADWP Marine Tanks

Phase I of the proposed Project specifically includes the removal of the three LADWP Marine Tanks and associated petroleum pipelines. As mentioned above, there would be a number of proposed project elements constructed under Phase I that would be operational during the removal of the LADWP Marine Tanks (e.g., the pedestrian bridge, the southern part of the land bridge, the observation tower, and the waterfront promenade). These features would bring sensitive receptors (recreational visitors) to the waterfront and in close proximity to the operation and the demolition and removal of the LADWP Marine Tanks and associated pipelines.

Only the vulnerability of the Port and the consequences of a terrorist action (i.e., releases of hazardous materials) can be evaluated. The vulnerability of the proposed Project during Phase I when certain elements of the proposed Project would operate in close proximity to the operation and then demolition and removal of the LADWP Marine Tanks can and would be reduced by implementing security measures. For

example, as part of Port-wide security measures, enhanced security in the area such as expanding the Port's waterside camera system to increase security along the waterfront promenade and the operation of the Port Police substation in Wilmington would reduce the vulnerability of the proposed Project in Phase I. Furthermore, the expected consequences (i.e., release of hazardous material) of a terrorist action can also be reduced by certain measures, such as emergency response preparations and BMPs during construction of the proposed Project. All emergency response plans discussed in Section 3.7.2.4, "Existing Public Emergency Services," would be implemented during the construction of the proposed Project. Additionally, The enforcement of construction and demolition standards, including BMPs by appropriate local and state agencies (i.e., LAPD, Port Police, LAFD, LAHD), would minimize the potential for a spill, release, or explosion of hazardous materials due to a terrorist action. Finally, the consequences of a hazardous spill, release, or explosion due to a terrorist action are related to the amount of the hazardous material present. The LADWP Marine Tanks and associated onsite pipelines would be drained prior to demolition and removal, minimizing the amount of material that could be released, spilled, or exploded during a terrorist act. Therefore, the LADWP Marine Tanks would not be at full capacity for the entire duration of Phase I of the proposed Project, and consequences of a hazardous spill, release, or explosion would not be substantially increased through the construction of the proposed Project.

Impact Determination

The construction of the proposed Project would comply with applicable security and safety regulations discussed under RISK-1a and above under Section 3.7.2.5, "Homeland Security of the Port," and Section 3.7.3, "Applicable Regulations," and/or Port policies guiding Port development, reducing the vulnerability of construction activities to terrorist actions. Therefore, construction and/or demolition activities would not result in an increase in vulnerability or consequence of a terrorist action leading to a greater likelihood of a spill, release, or explosion of hazardous material(s). Impact RISK-3a, related to a substantial increase in the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action, would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact RISK-4a: Construction of the proposed Project would not substantially increase the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications.

The following components of the proposed Project could result in hazardous material impacts on work personnel or sensitive receptors:

- general construction throughout the proposed project area during Phase I and Phase II,
- demolition of existing buildings,
- decommissioning of the LADWP Marine Tanks during Phase I,
- existing gas and oil pipelines, and,
- Olympic Tank site (Phase II).

General Construction

Potential short-term hazards include construction activities that involve the transport of fuels, lubricating fluids, solvents, and other potentially hazardous material. Additionally, construction equipment could spill oil, gas, or fluids during operation or refueling, resulting in potential health and safety impacts on construction personnel and others.

Although construction-related spills of hazardous materials are not uncommon, the potential consequences of such accidents are generally small due to the localized, short-term nature of the releases. The volume of the spills would be relatively small due to the fact that the volume in any single vehicle is generally less than 50 gallons, and fuel trucks are limited to 10,000 gallons or less. Additionally, quantities of hazardous materials that exceed the thresholds provided in Chapter 6.95 of the California Health and Safety Code would be subject to a Release Response Plan (RRP) and a Hazardous Materials Inventory (HMI). BMPs and Los Angeles Municipal Code regulations (Chapter 5, Section 57, Divisions 4 and 5; Chapter 6, Article 4) would also govern construction and demolition activities. Federal and state regulations that govern the storage of hazardous materials in containers (i.e., the types of materials and the size of packages containing hazardous materials) and the separation of containers holding hazardous materials would limit the potential adverse impacts of contamination to a relatively small area. As such, all hazardous materials used during construction of the proposed Project would be used and stored in compliance with applicable state and federal requirements. The following plans/requirements are incorporated into the proposed Project:

- Standard BMPs would also be used during construction and demolition activities to minimize runoff of contaminants, in compliance with the State General Permit for Stormwater Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and the project-specific SWPPP (see Section 3.14, “Water

Quality, Sediments, and Oceanography," for more information). Furthermore, in accordance with federal, state, and local regulations discussed in the Applicable Regulations section, the following actions would be implemented during demolition and construction to prevent spills from occurring and to minimize impacts in the event that they do occur:

- All spills would be cleaned up quickly, and all workers would be adequately trained to recognize the hazards associated with such spills.
- An SPCC Plan for the project site would be prepared in accordance with federal and state regulations. This plan must be prepared if petroleum products are stored on site in aboveground storage tanks with a capacity that equals or exceeds 55 gallons for a single tank or equals or exceeds 1,320 gallons aggregate for more than one tank. The SPCC Plan must be prepared before the delivery of petroleum products to the site. The SPCC Plan would include information on spill response procedures and fuel storage.
- Material Safety Data Sheets (MSDSs) for each chemical used during construction would be kept on site. Construction employees would be informed of the location and content of the MSDSs, as required by OSHA's Hazard Communication Standard, Title 29 of the Code of Federal Regulations (CFR) Section 1910.1200.
- In case of an accident, LAFD would be notified as the first responder. All other federal, state, and local notification requirements would be followed for any release that exceeds the reportable quantity or threatens to have a significant impact.
- The proposed project would comply with all transportation requirements for hazardous materials on state highways. These requirements apply to both hazardous materials coming onto the site and hazardous wastes leaving the site. All vehicles and construction equipment would be inspected to ensure that there are no leaking fluids (e.g., oil, hydraulic, lubricant, or brake fluid) and that all fuels and fluids are stored in proper, labeled containers. Any observation of spills, leaking fluids, or improperly stored fluids would trigger the issuance of a stop work notice until the problem is resolved, including the removal of any soil contaminated by vehicle fluids. The proposed Project would comply with all transportation requirements for hazardous materials on state highways. These requirements apply to hazardous materials coming onto the site and hazardous wastes leaving the site.

Removal of Existing Buildings

The construction of the proposed Project includes the removal of several industrial and commercial buildings located within the proposed project area. A list of all buildings or structures proposed for removal is provided in Table 2-2 and 2-3 of Chapter 2, "Project Description." These include a single, temporary (mobile) structure located on the southeast corner of C Street and Marine Avenue, measuring 60 by 24 feet; the Dockside Machine & Ship Repair buildings totaling 10,297square feet; 18,500 square feet of buildings and accessory structures associated with the LADWP Marine Tank Farm; the Catalina Freight Building, measuring approximately 30,000 square feet; the National Polytechnic College of Science Hyperbaric Chamber

Building, measuring approximately 2,600 square feet; and National Polytechnic College of Science Welding Pier, measuring approximately 1,800 square feet.

The potential for hazardous materials spills, releases, or explosions during the demolition and/or removal of these buildings would be present. However, the decommissioning of these sites would require the adherence to all standards and regulations discussed above and under RISK-1b below (i.e., EPCRA, LAFD regulations, DTSC, SCAQMD, and other state and federal regulations and guidelines) governing the decommissioning and remediation of hazardous materials and release of air contaminants during demolition. Additionally, the decommissioning would include remediation efforts to remove the known or suspected hazardous groundwater and soil contamination at the site. For a full discussion of the existing hazardous groundwater and soil contamination at these sites, please refer to Section 3.6, "Groundwater and Soils."

The existing buildings could contain lead based paint and asbestos, which could be released upon demolition. There are existing regulations and requirements for demolition buildings that could potentially contain lead based paint or asbestos (i.e.: SCAQMD Rule 1403—Asbestos Emissions from Demolition/Renovation Activities). The proposed Project would be required to abide by the following per local and state regulations:

- Prior to demolition of the site, the project applicant would retain a qualified engineer/ geologist to assess the building to be demolished to determine the presence, or lack, of PCB-containing materials (Polychlorinated Biphenyls), ACMs (Asbestos Containing Material), and LBP (Lead Based Paint) per State law. Should it be deemed necessary, remediation would be implemented in accordance with the recommendations of these assessments and in compliance with agency regulations. The following measures would occur as part of testing and demolition of the structure on site:
- Structural materials would be tested for potentially hazardous materials through a State-certified laboratory.
- Documentation would include a description of field procedures, tabulations of analytical results, and maps of sample locations. An evaluation of the levels and extent of contaminants found, and conclusions and recommendations regarding the handling and removal of potentially hazardous substances would be provided.
- Removal of ACM and LBP would be conducted by ACM- and LBP-certified removal contractors and trained workers. Appropriate dust monitoring would occur in conjunction with ACM and LBP removal activities.
- PCB-containing light ballasts and other PCB-containing materials found on site would be removed by a hazardous materials removal contractor.
- The project applicant would prepare a site Health and Safety Plan for work involving the removal of ACM-, LBP-, and PCB-containing materials.
- The disposal process would include transport by a State-certified hazardous material hauler to a State-certified disposal or recycling facility licensed to accept and treat hazardous waste generated by demolition of the on-site structure.

Decommissioning of LADWP Marine Tanks

The decommissioning and demolition of the LADWP Marine Tanks and associated pipeline would begin in June 2012 and is expected to take approximately one year. There is a potential for hazardous materials spills, releases, or explosions during the decommissioning and removal of these storage tanks. The tanks would be removed and decommissioned under the proposed Project, and the site would be evaluated for groundwater and soil contamination and would undergo remediation if needed.

The contents of the tanks and associated pipelines would be drained through the oil pipe distribution system prior to demolition and/or removal. Any petroleum product remaining in the system after this would be residual, and would be removed as contaminated waste, not as cargo. The removal of the tanks and associated petroleum piping would include the submittal of a work plan to the California State Fire Marshall (CSFM) and other applicable agencies, as appropriate. The piping to be removed would be drained of all fluids, cleaned, flushed, and then capped. Materials from the tanks and the piping would be characterized for disposal and disposed of at an appropriately certified hazardous waste facility. Testing would occur prior to the demolition of the tanks and the removal of the pipelines associated with the tanks and prior the removal. Should contamination be found, appropriate remediation would occur prior to or concurrent with construction, under approval of the appropriate oversight agency. (See Appendix H, Ninyo & Moore's technical study, for additional details regarding the abandonment and removal of the tanks.). The removal of the tanks and associated pipelines would be required to comply with all state and federal regulations discussed above under general construction.

There is potential for hazardous materials spills, releases, or explosions during the decommissioning of the LADWP Marine Tanks. However, the decommissioning would require adherence to EPCRA, DTSC, Cal-OSHA, LACFD regulations, and other state and federal regulations and guidelines governing the decommissioning and remediation of hazardous materials. These agencies and regulations would provide oversight and prevention techniques. See Section 3.6, "Groundwater and Soils," for a full discussion of the regulations governing existing ground and soil contamination in the proposed project area and for a discussion of potential groundwater and soil contamination at the LADWP Marine Tank site.

Existing gas and petroleum pipelines

There are a number of existing petroleum pipelines and gas lines that run along Water Street and Fries Avenue. The proposed Project would not remove, alter, or otherwise change these existing gas and petroleum pipelines. The proposed Project would be designed and constructed around the existing gas and petroleum pipelines.

Olympic Tank Site

The proposed Project includes the potential use of the Olympic Tank site by LADWP and Valero after the demolition and removal of the existing LADWP Marine Tanks to replace their lost storage capacity. The use of the Olympic Tank site would require modification and potential construction to allow for use by LADWP and/or

Valero. Any of these activities at the Olympic Tank site would likely use normal construction methods and therefore would require the handling, storage, and use of some small amounts of hazardous materials. The consequences of construction-related spills are generally reduced in comparison to other accidental spills and releases because the amount of hazardous material released during a construction-related spill is small, volume in any single piece of construction equipment is generally less than 50 gallons, and fuel trucks are limited to 10,000 gallons or less. Construction-related spills of hazardous materials are not uncommon, but the enforcement of construction and demolition standards, including BMPs by appropriate local and state agencies would minimize the potential for an accidental release of petroleum products and/or hazardous materials or explosions during construction (as discussed under RISK-1a).

Additionally, the use of the Olympic Tank site would be further evaluated under a separate CEQA process prior to any modification and/or construction. Therefore, any larger quantities of hazardous materials that may need to be handled, used, or stored during the modification and/or construction at the Olympic Tank site would be evaluated at that time.

Impact Determination

General construction and demolition activities for the proposed Project would not involve the handling of significant amounts of hazardous materials beyond those needed for construction vehicle operations and typical construction activities. Furthermore, implementation of construction and demolition standards, including BMPs, and compliance with the state and federal requirements for the transport, handling, and storage of any hazardous materials during construction and demolition phases, as described in RISK-1a, would minimize the potential for an accidental release of petroleum products and/or hazardous materials and/or explosion during the construction/demolition activities. Therefore, general construction would not result in substantially increasing the likelihood of an accidental spill, release, or explosion of hazardous materials as a result of modifications related to the proposed Project.

The demolition of any existing buildings would require adherence to EPCRA, LAFD regulations, DTSC, and Cal/OSHA and other state and federal regulations and guidelines governing the decommissioning of buildings potentially containing asbestos and lead, as well as regulating the handling, storage, and use of hazardous materials during the demolition of the existing buildings. Therefore, the demolition of existing buildings would not result in substantially increasing the likelihood of an accidental spill, release, or explosion of hazardous materials as a result of modifications related to the proposed Project.

The demolition and removal of the LADWP Marine Tanks and associated pipelines would occur as described above. The abandonment and removal of the LADWP Marine Tanks and associated pipelines could result in a spill, release, or explosion. Due to such a large quantity of liquid bulk material being removed, impacts associated with decommissioning would be significant if appropriate cleanup and disposal measures were not adhered to. However, the removal of the tanks and associated petroleum piping would require the submittal of a work plan to the CSFM

and other applicable agencies, as appropriate. The onsite piping associated with the LADWP Marine Tanks to be removed would be drained of all fluids, cleaned, flushed, and then capped. Materials from the tanks and the onsite piping would be characterized for disposal and disposed of at an appropriately certified hazardous waste facility. Testing would occur prior to the demolition of the tanks and the removal of the onsite pipelines associated with the tanks and prior to their removal. Should contamination be found, appropriate remediation would occur prior to or concurrent with construction, under approval of the appropriate oversight agency. Therefore, the regulations controlling the decommissioning of the LADWP Marine Tanks and associated onsite pipelines would reduce the consequences and likelihood of a spill, explosion, or release of hazardous materials associated with the tanks; and the proposed Project would not substantially increase the likelihood of a spill, release, or explosion of hazardous materials.

The existing gas and greater petroleum pipeline infrastructure of the Port along Fries and Water Streets would not be altered, removed, or relocated under the proposed Project. There are existing utility plans which identify the location of the existing pipelines. Although third party damage is a variable when determining the frequency of pipeline ruptures and leaks, the proposed Project would be subject to BMPs of construction, while using existing utility plans to carefully plan out excavation activities. This would substantially reduce the possibility to the point of such an incident being highly unlikely. Therefore, the construction of the proposed Project would not impact the existing pipelines, and impacts would be less than significant.

The activities at the Olympic Tank site would likely involve the handling, storage, and use of small amounts of hazardous materials. Construction-related spills of hazardous materials are not uncommon, but the enforcement of construction and demolition standards, including BMPs by appropriate local and state agencies would minimize the potential for an accidental release of petroleum products and/or hazardous materials or explosions during construction (as discussed under RISK-1a above). Additionally, the use of the Olympic Tank site would be further evaluated under a separate environmental process prior to any modification and/or construction. Therefore, under the proposed Project the Olympic Tank site would not result in a substantial increase in the likelihood of an accidental spill, release, or explosion of hazardous materials as a result of the proposed project–related modifications.

Therefore, construction of the proposed Project would not substantially increase the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications. Impacts would be less than significant. **.**

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.7.4.3.2 Operational Impacts

Impact RISK-1b: Operation of the proposed Project would comply with applicable federal, state, regional, and local security and safety regulations, and Port policies guiding Port development.

The following components of the proposed Project could be affected by the applicable safety and security regulations or risk assessment policies guiding the development of the Port:

- public elements of the proposed Project (observation tower, commercial, promenade, land bridge, etc.),
- Light Industrial and Commercial uses,
- decommissioning of the LADWP Marine Tanks (Phase I),
- Olympic Tank site (Phase II), and
- HGS.

These proposed project components are evaluated for their consistency with the applicable regulations and policies guiding development within the Port below.

Public Elements

All public elements of the proposed Project would comply with the applicable safety and security regulations and policies guiding the development of the Port. Proposed project operations at the waterfront promenade, observation tower, new and replacement viewing piers, and the small floating docks would include safety measures in accordance with existing regulations to ensure there is no risk to health and safety. Improvements to the streetscape and pedestrian amenities within the Avalon Development District and the closure of Avalon Boulevard south of A Street would improve pedestrian safety by providing expanded pedestrian rights-of-way and slowing traffic. Broad Avenue would carry through traffic to the waterfront and would be isolated from the park and recreational users. Establishment of the California Coastal Trail would create a safe multi-use path along Harry Bridges Boulevard, John S. Gibson Boulevard, and Front Street, and would buffer pedestrians and cyclists from traffic and rail operations.

Light Industrial and Commercial Uses

The proposed Project would include the redevelopment and operation of 150,000 square feet of light industrial space and 70,000 square feet of commercial space. The commercial uses would likely use small amounts of materials that could be considered hazardous, such as cleaning supplies and bleach, in the normal course of operation. These businesses would be required to follow all local, state, and federal regulations regarding the use, storage, and handling of these hazardous

materials. These regulations are enforced by agencies such as LAFD, OSHA, CalEPA, and EPA. The quantities that these businesses would use would be relatively small, as most cleaning supplies do not come in anything larger than a 50 gallon drum, and therefore any accidental spill, release or explosion would be short-term and localized. The use, handling, and storage of the supplies would be controlled by a number of local, state, and federal agencies including, among others, the LAFD, CalEPA, Cal/OSHA, and EPA.

The light industrial development could also use hazardous materials, such as those described above under the commercial uses. However, the light industrial uses could also use larger amounts of hazardous materials and a wider variety of hazardous materials than simply related to cleaning. All light industrial development would be further evaluated through a separate environmental process prior to the approval of the specific project. At that time, the proposed amount and type of hazardous material the light industrial use would use would be disclosed, and the hazardous material would be analyzed further in relation to the existing baseline.

Decommissioning of LADWP Marine Tanks

The LADWP Marine Tanks would be decommissioned under the proposed Project. However, the decommissioning would begin in 2012. Between 2009 and 2012 construction of the Phase I portion of the land bridge and the improvements to allow for the 58,000 square foot retail/commercial use would occur. The Phase I land bridge would be in operation prior to the demolition of the LADWP Marine Tanks and the 58,000 square foot of retail/commercial use in Area B could be in operation prior to the demolition.

The PMP RMP and supporting documents identify hazardous materials as materials with a flashpoint below 140°F. Since none of the three LADWP Marine Tanks contain materials defined as "hazardous" by the PMP RMP (i.e., the materials have flashpoints above 140°F) these tanks do not have a hazardous footprint and are not governed by policies of the PMP RMP.

Olympic Tank Site

The Olympic Tank site is approximately 1.5 miles from the land bridge, pedestrian bridge, waterfront promenade, and other public amenities of the proposed Project. It is in an area of existing industrial uses and is surrounded by industrial uses. Since the Olympic Tank site would be used to replace the lost storage capacity of LADWP and Valero under the proposed Project, the same materials (fuel oil) would be stored at the Olympic Tank site. Since these materials have a flashpoint above 140°F it would not be defined as hazardous by the PMP RMP and therefore would not be governed by the policies of the PMP RMP (see Section 3.7.2.2.1 for greater detail regarding materials stored at the LADWP Marine Tank Farm). However, the operation and maintenance of these tanks would be required to follow the state and federal regulations described under Section 3.7.3, "Applicable Regulations," for the handling, transport, storage, and use of hazardous bulk materials. Furthermore, activities at the Olympic Tank site would be evaluated under a separate CEQA process prior to those activities occurring.

Harbor Generating Station

A risk analysis was conducted pursuant to the Port's Risk Management Plan using CANARY and the EPA RMP Offsite Consequence Analysis Guidance for toxic releases and explosions due to the close proximity of the HGS and Peaker units to the proposed Project and the diesel and aqueous ammonia that the HGS stores on site. The analysis addressed the storage of diesel oil as diesel oil No. 2 at the two storage tank locations and each tank's capacity to generate a radiant heat footprint (Appendix G-1). The analysis also addressed the storage of aqueous ammonia, since it is capable of producing a toxic vapor cloud (Appendix G-1). The analysis of aqueous ammonia included the modeling of two postulated cases: a hose failure during truck transfer operations or the spillage of aqueous ammonia at the HGS storage tank site. The analysis used the toxic endpoint of 200 ppm for aqueous ammonia to define the area of impact associated with both of these two postulated aqueous ammonia cases.

For the diesel storage tanks, the radiant heat footprint generated by the analysis does not overlap any portion of the proposed project site (Appendix G-1). Under both postulated cases depicting a release of aqueous ammonia, a toxic vapor cloud is generated. However, the footprint of the toxic vapor cloud incorporating the toxic endpoint of 200 ppm generated by the two postulated cases does not overlap with the proposed project site. Please refer to Section 3.7.4.1.4 and Impact RISK-5 below for further discussion of the proposed Project and the HGS.

Impact Determination

The operation of the proposed Project would comply with applicable safety and security requirements regarding the public amenities and the commercial and light industrial uses. Light industrial uses that use large quantities or specific types of hazardous materials would be further analyzed prior to the approval of the project. The close proximity of the demolition and removal of the LADWP Marine Tanks during the operation of Phase I public elements would not result in a conflict with the PMP RMP or supporting documents, since the materials stored in the LADWP Marine Tank site are not considered hazardous per the PMP RMP and supporting documents. Furthermore, impacts associated with the decommissioning of the LADWP Marine Tanks would ultimately be beneficial to the entire area as it would remove an industrial use from the area.

Finally, the hazardous footprint of the liquid bulk storage diesel tanks and the footprint of the toxic endpoint of aqueous ammonia do not overlap with the proposed project site. Therefore, the location of the proposed project site and the HGS is consistent with provision of the Port's Risk Management Plan. Please see Impact RISK-5 for additional impact analysis associated with the HGS. Therefore, operation of the proposed Project would comply with applicable safety and security regulations, and policies guiding development within the Port.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact would occur.

Impact RISK-2b: Operation of the proposed Project would not substantially interfere with an existing emergency response or evacuation plan or require a new emergency or evacuation plan, thereby increasing the risk of injury or death.

The operation of the proposed Project could substantially interfere with the following existing emergency response or evacuation plans, including the following:

- LAHD's Emergency Operations and Organization Manual (September 2006);
- Tsunami Response Plan Annex of the Emergency Operations and Organization Manual (September 2007);
- Hazardous Materials Annex of the Emergency Department Master Plan and Procedures (December 1993);
- LAHD's Emergency Procedures Plan (July 2000); and
- LAHD's evacuation plans.

Port Emergency and Evacuation Plans

The operation of the proposed Project is designed specifically to increase public access to the waterfront; improve pedestrian connectivity from Wilmington to the waterfront; and enhance automobile, truck, and rail transportation within and around the immediate area of the Port. The proposed Project seeks to achieve these goals by improving existing infrastructure and providing new infrastructure facilities, providing waterfront linkages and pedestrian enhancements, and providing increased development and redevelopment opportunities in the Avalon Development District and Avalon Waterfront District. It incorporates many elements that would attract visitors and additional tenants, including:

- improvements at the Avalon Waterfront District, including a waterfront promenade with 12,000 square feet of restaurant development, a 200-foot-tall observation tower, and a 10-acre landscaped bridge and pedestrian "water" bridge providing the Wilmington Community safe access to the waterfront;
- infrastructure improvements and enhancements within the Avalon Development District to allow for the potential development of up to 150,000 square feet of industrial uses and up to 58,000 square feet of commercial retail/Mercado uses, a 1-acre park located on the vacated Railroad Green, and adaptive reuse of the historic 14,500-square-foot Bekins Storage property for a Waterfront Red Car Museum;
- transportation linkages, enhancements, and improvements including vacation of Avalon Boulevard south of A Street, realignment and continuation of Broad

Avenue to the waterfront, and realignment of Water Street to increase usable area at the waterfront; and

- extension of the Waterfront Red Car Line and continuation of the California Coastal Trail along Avalon Boulevard to Swinford Street.

As identified above, the following emergency plans apply to the Port area:

- LAHD's Emergency Operations and Organization Manual (September 2006);
- Tsunami Response Plan Annex of the Emergency Operations and Organization Manual (September 2007);
- Hazardous Materials Annex of the Emergency Department Master Plan and Procedures (December 1993);
- LAHD's Emergency Procedures Plan (July 2000); and
- LAHD's evacuation plans.

The City of Los Angeles' LAHD Emergency Operations and Organization Manual, the Tsunami Response Plan Annex, and the Hazardous Materials Annex provide general emergency response guidance to all City departments, including LAHD. LAHD is responsible for following this guidance in the event of an emergency. Furthermore, LAPD, LAFD, and the Port Police would be able to provide adequate emergency response services during operation of the proposed Project (see Section 3.13, "Public Services," for more information regarding police and fire response capabilities). The proposed project components would also be subject to emergency response and evacuation systems implemented by LAFD. LAFD would review all plans to ensure that adequate access to the proposed project vicinity is maintained. Therefore, the proposed Project would not substantially interfere with the existing LAHD Manual, Tsunami Response Plan, or Hazardous Materials Annex.

The Homeland Security Division for the Port maintains control of LAHD's Emergency Procedures Plan and is responsible for the current update of the plan. This plan is designed to provide overall guidance on how the department responds to general emergencies, including guidance for LAHD employees. It is meant to identify procedures and organize operations during general emergencies at locations where LAHD employees work. The proposed Project does not actually include any specific locations for LAHD employees to work. Since the LAHD Emergency Procedures Plan is related to work locations, it is not applicable to the elements identified in the proposed Project.

Tenants of the Port are required to have their own emergency management plans. Therefore, all new tenants under the proposed Project would be required to have unique emergency response plans (Malin pers. comm. 2008b). These requirements and the adequacy of the tenant emergency plans would be enforced by LAFD, the Port Police, the Homeland Security Division of the Port, and the USCG. Therefore, the proposed Project would not substantially interfere with existing emergency response plans for the existing tenants of the proposed Project but would require new emergency responses plans for new tenants.

Port evacuation plans are maintained and managed by the Area Maritime Security Evacuation Committee (AMSEC) and apply to all areas covered by the Ports of Los Angeles and Long Beach, which include the proposed project area. These plans are being revised and are updated on an as-needed basis by AMSEC. Additionally, LAHD is currently developing an Emergency Notification System that would support Port evacuation plans. Port Police is responsible for implementing the evacuation plans. Because these plans contain sensitive security material, they are not available to the general public (Malin pers. comm. 2008a).

Impact Determination

Although the proposed Project is designed to bring new visitors to the waterfront area, the current emergency preparedness plans would accommodate the proposed Project. The project would realign Water Street between Fries Avenue and Avalon Boulevard, and would close the connection between Avalon Boulevard north of Broad Avenue and Avalon Boulevard south of Broad Avenue. This does not materially change the access patterns to and from the site, but may require changes to some specific plans that are already in place. Additionally, the water bridge provides an additional pedestrian ingress and egress to the waterfront over the railroad tracks. When the land bridge is complete (after demolition of the DWP tanks), it would provide still another pedestrian link and a new route for emergency vehicles over the railroad tracks. Additionally, any new tenant would be required to implement and follow its own emergency management plans, which would be enforced by LAHD and LAFD. Furthermore, LAHD is in the process of updating its evacuation plan and establishing an Emergency Notification System, which would include the proposed project area.

Therefore, the operation of the proposed Project would not substantially interfere with an existing emergency response or evacuation plan or require a new emergency response or evacuation plan. Impact RISK-2b would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact RISK-3b: Operation of the proposed Project would not substantially increase the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action.

The following proposed project components are sources of hazardous materials within the proposed project area during its operation and therefore could pose a risk of accidental spill, release, or explosion of hazardous materials due to a terrorist action:

- Public elements, and
- LADWP Marine Tanks during Phase I (prior to removal in 2012).

These proposed project components are individually evaluated below as to whether they would substantially increase the likelihood of accidental hazardous material releases, spills, or explosions due to a terrorist act.

As discussed previously in Section 3.7.2.5, "Homeland Security of the Port," the risk of terrorism can be generally defined by the combination of three factors:

- threat of a terrorist action (which includes the likelihood of action),
- vulnerability of a particular facility to a terrorist action, and
- consequence(s) of a terrorist action.

There are limited data available to indicate how likely or unlikely a terrorist action aimed at the Port or the proposed Project would be, and therefore the probability component of a risk analysis of terrorism cannot be evaluated accurately without a considerable amount of uncertainty. However, simply because the likelihood of a terrorist action cannot be quantified, that does not mean that the threat does not exist. In fact, the possibility of a terrorist action against the Port exists because of its maritime operations, substantial cargo operations, and the existing cruise facilities and cruise vessels.

Public Elements

The proposed Project would increase the number of public amenities in the Port and would bring more visitors to the Wilmington Waterfront, as stated in the proposed Project objectives. However, increasing the number of public amenities (i.e., the observation tower and land bridge) and recreational opportunities (i.e., waterfront promenade and CCT) would not appreciably change the likelihood of a terrorist action at the Port, since the likelihood of a terrorist action is dependent on the motivation and decision-making of a terrorist organization and LAHD has no control over these factors. Therefore, the likelihood of a terrorist action would remain a possibility for the proposed Project, just as it does under existing conditions at the Port.

LADWP Marine Tanks (Phase I)

Phase I of the proposed Project specifically includes the removal of the three LADWP Marine Tanks and associated petroleum pipelines. There would be a number of proposed project elements constructed under Phase I of the proposed Project that would be operational during the removal of the LADWP Marine Tanks (e.g., the pedestrian bridge, the southern part of the land bridge, the observation tower, and the waterfront promenade). These features would bring residents and visitors to the waterfront and place them in close proximity to the operation of and then the demolition and removal of the LADWP Marine Tanks and associated pipelines. Additionally, these features could be seen as higher profile targets for

potential terrorist action, when compared to the surrounding land uses (i.e., light and heavy industrial and vacant lots). However, as described above, the threat of a terrorist action is driven by factors which LAHD cannot control (i.e., decision making of the terrorist organization); therefore, the threat of the terrorist action cannot be directly affected by activities in the Port. Thus, the operation of the proposed Project cannot directly influence the threat or likelihood of a terrorist action.

The remaining two components related to the risk of terrorism—vulnerability and consequences—can be qualitatively defined and evaluated within the context of a release, spill, or explosion of hazardous materials.

The vulnerability of Port activities to terrorist actions can be described within the context of the procedures and policies in place to specifically safeguard the Port, cruise terminals, shipping terminals, businesses, and visitor uses against a terrorist action that are in place to specifically discourage or avert a terrorist action (discussed above in Section 3.7.2.5, "Homeland Security of the Port"). The proposed Project would comply with all existing applicable security and safety regulations, which are fully enforceable by the Port. The vulnerability of the proposed Project during Phase II (specifically when certain elements of the proposed Project would operate in close proximity to the operation and then demolition and removal of the LADWP Marine Tanks) can and would be reduced by implementing security measures to reduce vulnerability as well. For example, as part of Port-wide security measures, enhanced security in the area, such as expanding the Port's waterside camera system to increase security along the waterfront promenade and the operation of the Port Police substation in Wilmington, would reduce the vulnerability of the proposed Project. Therefore, the operation of the proposed Project would not substantially increase or contribute to the vulnerability of a terrorist action on the proposed project site or at adjacent land uses.

The environmental consequences of a terrorist action, including threat to human health arising from the release, explosion, or spill of hazardous materials, would remain relatively the same for the proposed Project when compared to the existing conditions. However, the expected consequences of a terrorist action can also be reduced by certain measures, such as emergency response preparations and BMPs during construction of the proposed Project. All emergency response plans discussed in Section 3.7.2.4, "Existing Public Emergency Services," would be implemented during the construction of the proposed Project. Additionally, the enforcement of construction and demolition standards, including BMPs by appropriate local and state agencies (i.e., LAPD, Port Police, LAFD, LAHD), would minimize the potential for a spill, release, or explosion of hazardous materials due to a terrorist action. Finally, the consequences of a hazardous spill, release, or explosion due to a terrorist action are related to the amount of the hazardous material present. The LADWP Marine Tanks and associated pipelines would be drained prior to demolition and removal, minimizing the amount of material that could be released, spilled, or exploded during a terrorist act. Therefore, the LADWP Marine Tanks would not be at full capacity for the entire duration of Phase II of the proposed Project, and consequences of a hazardous spill, release, or explosion would not be substantially increased through the operation of the proposed Project. Once the LADWP Marine Tanks are fully

decommissioned, there would be a reduction of consequences, since the hazardous material would no longer exist.

Thus, the proposed Project would reduce the vulnerability of an attack by implementing the security measures discussed above, which would reduce the consequences of a release, spill, or explosion of hazardous materials. Furthermore, any hazardous materials at the proposed project site would be stored subject to the applicable state and federal laws and in accordance with the LACFD; these laws are designed to, first, prevent hazardous materials spills, releases, and explosions; and, second, reduce the consequences of a hazardous material spill, release, or explosion.

Impact Determination

Although the proposed Project would increase the number of visitors to the area, it would not ultimately change the vulnerability of proposed project area or the seriousness of the consequences from the existing baseline. The environmental consequences of a terrorist action, including threats to human health arising from the action and from the release, explosion, or spill of hazardous materials, would not substantially change.

Therefore, operation of the proposed Project would not result in a substantial increase in the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action. Impact RISK-3b would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact RISK-4b: Operation of the proposed Project would not substantially increase the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications.

The following proposed project components are sources of hazardous materials within the proposed project area during its operation and therefore could pose a risk of accidental spill, release, or explosion of hazardous materials:

- Avalon Development District

The following are existing uses that would continue operating adjacent to the proposed project elements during their construction and operation:

- LADWP Marine Tank site during Phase I (prior to removal in 2012), and

- existing gas and petroleum pipelines.

These proposed project components are individually evaluated below as to whether they would substantially increase the likelihood of accidental hazardous material releases, spills, or explosions.

Avalon Development District

The proposed Project would include the infrastructure improvements and enhancements within the Avalon Development District, including the potential development of up to 150,000 square feet of industrial uses (assessed programmatically), development of up to 58,000 square feet of commercial retail/Mercado uses (assessed programmatically), a 1-acre park located on the vacated Railroad Green, and adaptive reuse of the historic 14,500-square-foot Bekins Storage property for a Waterfront Red Car Museum. The operation of the Avalon Development District under the proposed Project would not include handling, transporting, or storing hazardous materials or hazardous wastes at the program level, but individual development proposals would be evaluated under CEQA, and state and federal hazardous material laws would apply.

The existing commercial uses in the vicinity of the Avalon Development District use small amounts of materials that could be considered hazardous in the normal course of operation. These businesses are currently required to comply with all local, state, and federal regulations regarding the use, storage, and handling of these hazardous materials. Regulations are enforced by agencies such as LACFD, OSHA, DTSC, and EPA. The operation of the newly planned structures associated with the proposed Project would also use similar hazardous materials during the normal course of business and would be required to comply with local, state, and federal regulations on the use, handling, and storage of these materials. Enforcement of these regulations would be performed by LACFD, OSHA, DTSC, and EPA.

LADWP Marine Tank Site during Phase I

The LADWP Marine Tanks and associated pipelines would be decommissioned under the proposed Project. However, the decommissioning would begin in 2012. Between 2009 and 2012 construction of the Phase I portion of the land bridge and the improvements to allow for the 58,000 square foot retail/commercial uses would occur. The Phase I land bridge would be in operation prior to the demolition of the LADWP Marine Tanks, and the 58,000 square foot of retail/commercial uses could be in operation prior to the demolition.

The PMP RMP and supporting documents identify hazardous materials as materials with a flashpoint below 140°F. Since none of the three LADWP Marine Tanks contain materials defined as “hazardous” by the PMP RMP (i.e., the products have flashpoints above 140°F) these tanks do not have a hazardous footprint and are not governed by policies of the PMP RMP (see Section 3.7.2.2.1 for greater detail regarding materials stored at the LADWP Marine Tank Farm).

However, failures at the oil tank farm(s) could include tank ruptures or leaks, and piping and equipment (e.g., pumps) leaks or failures. In the majority of cases, tank failure does not represent a hazardous scenario because the tank dike would contain the entire volume of the tank. Hazardous consequences would follow only if the dike is damaged (e.g., due to an external event such as an earthquake or a deliberate attack), with a subsequent release into the environment, or if the oil spill is followed by fire with thermal radiation effects.

If a petroleum product spill were to catch fire, there could be a threat to public safety through thermal radiation effects. Petroleum products that could pose an explosion hazard are characterized by a low flash point (i.e., below 140°F). However, the products stored in the LADWP Marine Tanks have flashpoints above 140°F and therefore are not considered to be explosion hazards. In addition, the use of floating roof tanks and Best Available Control Technologies (BACTs) at the LADWP Marine tanks would eliminate the tank vapor space. All but a residual amount of vapors would remain, which, in turn, would substantially reduce the potential for a large flammable vapor cloud and subsequent explosion.

Based on the fact that the products stored at the LADWP Marine Tank site are not considered hazardous per the PMP RMP, impacts from radiant heat from a fire, flammable gas from a release without a fire, blast overpressure from an explosion, flying debris from an explosion, and toxic gas from a release are considered less than significant in Phase I of the proposed Project.

Once the LADWP Marine Tanks and associated pipelines have been fully decommissioned, there would no longer be any potential for accidental release, spill, or explosion of hazardous materials on this site.

Existing Gas and Petroleum Pipelines

The existing gas and petroleum pipelines are owned and operated by various companies. These companies are responsible for the upkeep and maintenance of the pipelines per the federal and state regulations discussed in Section 3.7.3, "Applicable Regulations." These regulations include:

- the DOT Hazardous Material Regulations that include all aspects of hazardous materials packaging, handling, and transportation including Parts 195 regarding liquids by pipelines;
- oversight by the Pipeline Hazardous Materials Safety Administration acting through the Office of Pipeline Safety under DOT; and
- the California Pipeline Safety Act of 1981, which outlines the more stringent requirements than those of the federal government for the testing, monitoring, and maintenance of pipelines in California.

The proposed Project would not alter, remove, or relocate any of the existing gas or petroleum pipelines.

Impact Determination

The proposed project modifications to the existing area would not substantially increase the likelihood of an accidental hazardous material spill, release, or explosion involving people or property. The existing facilities would continue to comply with state and federal regulations regarding the use, storage, and handling of hazardous materials. Although commercial and industrial land use square footage could potentially increase under the proposed Project, it is anticipated that daily use of hazardous materials would not change substantially from baseline conditions. Because the companies that would occupy the buildings are unknown at this time, future environmental review would consider and evaluate individual projects as they are proposed. However, all businesses operating within the proposed project boundaries would be required to comply with all applicable regulations for any hazardous material used, stored, transported, or disposed of during project operation. Any accidental spill, release, or explosion would be short-term and localized due to the enforcement of these regulations. Therefore, the new industrial development in the Avalon Development District would not result in a substantial increase of the likelihood of a hazardous materials spill, release, or explosion due to proposed project modifications.

The removal of the LADWP Marine Tanks and associated pipelines from the proposed project area would remove hazardous materials from the area. Remediation of the site would ensure future land uses are not contaminated. The removal of these industrial uses and associated soil remediation would result in a reduction of the likelihood of an accidental hazardous material spill, release, or explosion in the area. However, some proposed project elements would be in operation prior to the removal of the Marine Tank Farm. Because flash points are above 140°F impacts would be less than significant during this time. Therefore, the removal of the LADWP Marine Tanks and associated onsite pipelines would not result in a substantial increase in the likelihood of hazardous materials spills, releases, or explosions.

Finally, the existing gas and greater Port-wide petroleum pipeline infrastructure along Fries and Water Streets would remain in their current location. Pipelines have historically had one of the lowest failure rates, and leaks are caused primarily by corrosion, according to the CSFM report. However, leaks would generally not threaten the proposed Project, nor would the proposed Project substantially increase the existing pipeline infrastructure to cause leaks. Therefore, the primary concerns with accidental releases of a pipeline are associated with ruptures or spills that might jeopardize the public using the proposed Project. The existing pipelines would be subject to all federal and state regulations in place that are meant to minimize the frequency and duration of release of hazardous substances, and reduce the amount should a release occur. The existing pipelines would continue to be regularly tested for structural integrity, and should a problem develop or be detected, the owner and operator would be responsible for fixing and/or replacing the defective length of pipeline.

For fire hazards, the concern is intensity of thermal radiation and its effects on public health and safety. Data on the exposure time necessary to reach pain thresholds indicates that relatively high thermal radiation levels can be tolerated without

significant pain or injury. Therefore, there would usually be sufficient time for people to escape the immediate area of the fire before significant physical injury is suffered. Although there have been serious injuries and/or death involved in pipeline incidents, historic statistics demonstrate that serious injury and/or death are rare in pipeline incidents. Additionally, California only reported two fires caused by pipelines, powerlines, or other utilities rights-of-way between 2003 and 2006, which is a relatively low level of incident. Furthermore, the existing pipelines would continue to be regulated under the federal and state laws intended to minimize and limit the frequency and duration of pipeline fires. Therefore, the proposed Project would not substantially increase the likelihood of an accidental pipeline fire associated with proposed project modifications.

The proposed Project would not result in a substantial increase in the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications. Impact RISK-4b would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact RISK-5: Operation of the proposed Project would not introduce the general public to hazard(s) defined by the EPA and Port RMP associated with offsite facilities.

As discussed under RISK-4a and -4b above, the proposed project modifications to the existing area would not substantially increase the likelihood of an accidental hazardous material spill, release, or explosion involving people or property for onsite facilities.

The proposed project components, however, would be located within close proximity to the following offsite existing facility:

- HGS

The proposed Project and this offsite facility are evaluated below as to whether the proposed project would introduce the general public to hazards defined by the EPA and the Port's Risk Management Plan.

Harbor Generating Station

The risk management analysis completed for the proposed Project assessed the storage of diesel oil and aqueous ammonia at the HGS. As discussed in Section 3.7.4.1.4 and RISK-1b above, the analysis of the liquid bulk diesel storage tanks determined that the radiant heat footprints generated from the two sites do not

overlap any portion of the proposed project area (Appendix G-1). Also, as discussed in RISK-1b above, the risk management analysis assessed two postulated aqueous ammonia accidents at HGS. The toxic endpoint of 200 ppm for aqueous ammonia was used to define the area of impact associated with both of these two postulated aqueous ammonia accidents. Under both cases, a toxic vapor cloud is generated. However, the toxic vapor cloud does not overlap with the proposed project area (Appendix G-1).

Impact Determination

Since the hazard footprints generated by the analysis of the liquid bulk diesel storage tanks do not overlap with any portion of the proposed Project area (Appendix G-1) the liquid bulk diesel storage tanks would not introduce the general public to hazard(s) defined by the Port's Risk Management Plan. Furthermore, the hazardous footprints of the ammonia storage tanks analyzed under two postulated cases, which are defined by the area of impact with a toxic endpoint for aqueous ammonia at or below 200 ppm, do not include the proposed project site (Appendix G-1). Therefore, the proposed Project would not introduce the general public to hazard(s) defined by the EPA. Thus, the proposed Project would not introduce the general public to hazard(s) defined by the EPA or Port's Risk Management Plan, and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.7.4.3.3 Summary of Impact Determinations

Table 3.7-2 summarizes the impact determinations of the proposed Project related to hazards and hazardous materials, as described in the detailed discussion in Sections 3.7.4.3.1 and 3.7.4.3.2 above. Identified impacts may be based on federal, state, and City of Los Angeles significance criteria, LAHD criteria, and the conclusions of the technical reports.

For each type of impact, the table describes the impact, notes the impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table.

Table 3.7-2: Summary Matrix of Potential Impacts and Mitigation Measures for Hazards and Hazardous Materials Associated with the Proposed Project

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.7 Hazards and Hazardous Materials			
Construction			
RISK-1a: Construction of the proposed Project would comply with applicable federal, state, regional, and local security and safety regulations, and Port policies guiding Port development.	Less than significant	No mitigation is required	Less than significant
RISK-2a: Construction of the proposed Project would not substantially interfere with an existing emergency response or evacuation plan or require a new emergency or evacuation plan, thereby increasing the risk of injury or death.	Less than significant	No mitigation is required	Less than significant
RISK-3a: Construction of the proposed Project would not substantially increase the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action.	Less than significant	No mitigation is required	Less than significant
RISK-4a: Construction of the proposed Project would not substantially increase the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications**.**	Less than significant	No mitigation is required.	Less than significant
Operations			
RISK-1b: Operation of the proposed Project would comply with applicable federal, state, regional, and local security and safety regulations, and Port policies guiding Port development.	No impact would occur	No mitigation is required	No impact would occur

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
RISK-2b: Operation of the proposed Project would not substantially interfere with an existing emergency response or evacuation plan or require a new emergency or evacuation plan, thereby increasing the risk of injury or death.	Less than significant	No mitigation is required	Less than significant
RISK-3b: Operation of the proposed Project would not substantially increase the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action.	Less than significant	No mitigation is required	Less than significant
RISK-4b: Operation of the proposed Project would not substantially increase the likelihood of an accidental spill, release, or explosion of hazardous material(s) as a result of proposed project–related modifications.	Less than significant	No mitigation is required	Less than significant
RISK-5: Operation of the proposed Project would not introduce the general public to hazard(s) defined by the EPA and Port RMP associated with offsite facilities.	Less than significant	No mitigation is required	Less than significant

3.7.4.4 Mitigation Monitoring

No significant adverse impacts from hazards and hazardous materials would occur as a result of the proposed Project; therefore, no mitigation is required.

3.7.5 Significant Unavoidable Impacts

No significant unavoidable impacts on Hazards and Hazardous Materials would occur during construction or operation of the proposed Project.