Section 3.7
Hazards and Hazardous Materials

3.7.1 Introduction

This section addresses hazards and hazardous materials related to construction and operation of the proposed Project and discusses impacts in the event of Project-related releases of hazardous materials to the environment. This section also describes impacts on public health and safety posed by the proposed Project. These impacts include the risk of fires, explosions, and releases of hazardous materials associated with historic and current activities, as well as construction and operation of the proposed Project.

3.7.2 Environmental Setting

The following discussion describes the environmental characteristics and regulatory framework related to hazards and hazardous materials and risk of upset that could potentially affect, or could potentially be affected, by implementation of the proposed Project. Information pertaining to hazardous materials and wastes located on or in proximity to the proposed Project was obtained through a review of a Phase I Environmental Site Assessment (ESA) report prepared by The Source Group, Incorporated (SGI, 2006) and a Phase I/II ESA prepared by Locus (2009). This information is considered representative of baseline conditions (2010).

3.7.2.1 Hazardous Materials and Wastes - Overview

Hazardous materials are the raw materials for a product or process that may be classified as toxic, flammable, corrosive, or reactive. Hazardous materials that may be transported between port terminals and the proposed Project via truck and rail include:

- 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 A, B, or C explosives.
- 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 that are capable of violent decomposition or autoreaction, but which are not designed primarily as an explosive.

- Radioactive materials — those materials that undergo spontaneous emission of radiation from decaying atomic nuclei.
- Water-reactive materials — those materials that react violently or dangerously upon exposure to water or moisture.

Hazardous materials that are transported in shipping containers are stored in individual containers specifically manufactured for storing and transporting the material. In addition, shipping companies prepare, package, and label hazardous materials shipments in accordance with federal requirements (49 CFR 170-179) to facilitate surface transport of the containers. All hazardous materials in containers are required to be properly manifested. Hazardous material manifests for inbound containerized hazardous materials are reviewed and approved by the Port of Los Angeles (POLA) Security and the City of Los Angeles Fire Department before they can be unloaded (Port of Los Angeles, 2007). Containers with hazardous materials are labeled and separated from nonhazardous materials.

The Los Angeles Harbor Department (LAHD) estimates that approximately 0.25 percent of the total containers that pass through the Port contain hazardous materials. Based on the annual container volume of 7.8 million twenty-foot equivalent units (TEUs) for calendar year 2010 (Port of Los Angeles, 2012), the POLA handles approximately 39,000 TEU per year that contain hazardous materials. While container ship classes vary, this is the approximate capacity of four large container ships. Similar figures apply to the Port of Long Beach.

Containers carrying hazardous materials are transported to and from port terminals via truck and rail. While in the terminals, these containers are only handled by authorized workers. Worker authorization is attained through the Transportation Worker Identification Credential (TWIC) program. Additional information regarding the TWIC program is provided in Section 3.7.2.6.1.

Hazardous materials/waste spills that occur on port-related properties are tracked through the California Emergency (Cal EMA, former the Office of Emergency Services). Cal EMA maintains the Response Information Management System (RIMS) database that includes detailed information on all reported hazardous material spills in California. All spills that occur within the state of California, both hazardous and non-hazardous, are required to be reported to the Cal EMA and entered into the RIMS database. This database includes spills that may not result in a risk to the public, but could be considered to be an environmental hazard.

3.7.2.2 Existing Hazardous Materials and Waste Conditions

As part of the ESA for the proposed Project area, SGI (2006) conducted historical research (including a review of reports, historical topographic maps, and aerial photographs), reviewed available regulatory files and government databases to research and assess any previous or current recognized environmental conditions (RECs) and, to the extent permissible, conducted site inspections and interviewed knowledgeable site personnel. Locus (2009) conducted a similar investigation of the ACTA alternate site west of the Dominguez Channel. The Project site, including the alternate sites for certain businesses, is depicted in Figures 2-2 and 2-5.

3.7.2.2.1 General Conditions

In accordance with the American Society for Testing and Materials (ASTM) Designation E 1527-05 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, a REC refers to the presence of, or likely presence of, any hazardous substances or petroleum products at the site under conditions that indicate a release, a past release, or a material threat of a release of these substances or products into structures, into the ground, into groundwater, or into surface water at the Site. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The SGI and Locus reports (Appendix E) describe the historical activities that have occurred within the proposed Project site that have resulted in a REC. Those reports identified RECs that include contamination of soils and groundwater from the following land uses at the Project site.

- Oil field activities
- Auto repair, dismantling, wrecking storage,
- Shipping container storage
- Cargo storage
- Railroad tracks

These land uses have included aboveground storage of gasoline, diesel fuel, propane, fuel oil, jet fuel, oily water, nitrogen, oxygen, argon, ammonia, hydrogen, oily water, oil, and reinjection water, as well as underground storage of diesel and gasoline fuel (which may have also included gasoline, oily water, oil, and reinjection water).

A vapor extraction system exists immediately east of the Three Rivers Trucking facility. Historical evidence suggests that a large number of underground storage tanks were permitted and used in the Project area, and that oil production pits, sumps, or un-registered USTs are present in the area. Past practices of California Carbon Corporation, a sub tenant to Fast Lane, were reported to include the disposal of PCE directly to the ground. Grading on the LA Harbor Grain Terminal site in the mid-1980s revealed buried automotive parts. Further, as evidenced by the removal of 30 drums from the San Pedro Forklift site and an unknown number of drums of paint from the LA Harbor Grain terminal site (SGI, 2006), the presence of buried drums must be considered. The Phase I studies documented USTs on the Fast Lane and California Carbon sites as well as on the SCIG site. These pits, sumps, USTs, and drums, and their contents, represent RECs. A number of railroad tracks cross the properties that represent potential sources of contamination from train activity.

Contaminants of concern and contaminants of potential concern identified in the Phase I site assessments include petroleum hydrocarbons, metals (including lead-containing paint), solvents, volatile organic compounds (VOCs, including perchloroethylene [PCE], 1,1-Dichloroethane [1,1-DCA] and 1,1-dichloroethylene [1,1-DCE]), and polychlorinated biphenyls (PCBs).

Currently San Pedro Forklift has a conditional use permit to conduct container fumigation services at their site. Per the conditions of the permit, usage of Methyl Bromide (MeBr) for fumigation of containers at the site is limited to 20,000 pounds per year (10 tons per

year) (LA-ACWM, 2012). Emissions of MeBr from fumigation activities at the San Pedro Forklift site have not been estimated nor has a health risk study been conducted as part of any regulatory permit for this site.

3.7.2.2.2 Underground Pipelines and Petroleum Production Facilities

- Based on the Phase I ESA summary of activities conducted throughout the Project area (see Table 1 of Appendix E) and on comments received on the Draft EIR, there are numerous underground pipelines and related facilities on or near the proposed Project site. The overall area has historically been used for oil production/exploration, involving multiple petroleum pipelines within the Project site. There are numerous underground pipelines running in various locations across the property. Eleven lines that carry petroleum-related products underlie the Project site, the largest being a 42" diameter line and the others being various smaller diameters (Seep, 2009). There is a Tosco petroleum pipeline pump house along the western border of the proposed Project site on the SCE right-of-way. Petroleum pipelines owned by Shell Oil and Pacific Energy Partners, LP traverse the SCE right-of-way. Warren E&P operates 12 oil wells, eight water injection wells, and related facilities on the alternate location sites, and several petroleum pipelines in the general project area.
- Subsurface methane is commonly associated with oil production. The proposed Project site is located in an area identified as a potential methane hazard site (City of Los Angeles, 1996) due to its proximity to methane gas sources such as oil wells and oil fields. As such, methane gas mitigation systems would be incorporated into the design of any paved area or inhabited structure on the Project site, as required by City of Los Angeles Municipal Code, Section 91.106.4.1 and Division 71 of Article 1, Chapter IX (City of Los Angeles, 2012). The specific requirements for active and passive mitigation systems would depend upon the concentration of methane gas detected in site-specific testing, as set forth in Table 71 of Municipal Code Chapter IX, which specifies protection levels ranging from I (the least stringent) to V (the most stringent).
- **ACTA Site**: Numerous petroleum pipelines are located on this site, the majority of which run along the northern (former Grant Street) and southern (Southern Pacific Drive) boundaries of the site. The largest capacity pipeline was noted to be a 42-inch diameter TOSCO pipeline located in former Grant Street (*Phase I Environmental Site Assessment Fast Lane/ACTA Maintenance Yard & Long Beach Lead, Los Angeles, CA*). A Southern California Gas Company gas line is also reported to be nearby. Several oil wells, owned and operated by Warren E&P, are located on the site. Based on the historical use of sumps during oil production/exploration, there is the possibility that undiscovered sumps exist on the site.
- **Fast Lane:** Several oil wells, owned and operated by Warren E&P, are located on the Fast Lane site. Based on the historical use of sumps during oil production/exploration, there is the possibility that undiscovered sumps exist on the site.
- **Long Beach Lead:** Jointly owned by the cities of Long Beach and Los Angeles, this rail line right-of-way has numerous subsurface utility lines and petroleum pipelines through the site, some of which were relocated during the construction of new tracks POLB-1 and POLB-2. Petroleum pipelines noted within the Long Beach Lead area include those owned by ARCO, Equilon (Shell), Ultramar, GATX, and SCE, ranging from 6 inches to 24 inches in diameter. Some are suspected of leakage based on

subsurface contamination and free product on the water table in 2001. Two oil wells have been previously documented on maps of the Long Beach Lead area.

3.7.2.3 Public Emergency Services

Responding to hazardous situations on and in the vicinity of the proposed Project is the responsibility of the fire and police departments associated with the cities of Los Angeles, Long Beach, and Carson in their respective jurisdictions. With regard to cargo entering the San Pedro Bay Ports prior to arrival at the proposed Project, fire-related emergencies are handled by two large fireboats and three small fireboats that are strategically placed within the Harbor. Public services are discussed in greater detail in Section 3.12.

3.7.2.4 Hazardous Substances Management Plans

The following sections discuss the programs currently in place at POLA to manage hazardous materials and wastes. In addition, a discussion of the active BNSF environmental programs, which would be employed at the SCIG facility, is provided.

3.7.2.4.1 BNSF Hazardous Substances Management Plans

BNSF is a partner member of the Responsible Care® program, a voluntary chemical safety and handling management system under the auspices of the American Chemistry Council. In addition, BNSF has several internal programs, discussed below, to address personnel safety and to reduce releases of hazardous materials due to accidents (also called accident releases). BNSF works with customers to reduce non-accident releases by improving packaging and containment. In the event a problem does occur, BNSF's spill response program, discussed below, is designed to minimize impact to the environment, the community, and BNSF operations.

- A Hazardous Materials Emergency Response Plan is developed for every BNSF facility in the U.S. For BNSF facilities located in California, the Hazardous Materials Emergency Response Plans and California Business Plans consist of the following components:
- A list of emergency contact numbers for the following parties: the Emergency Coordinator at the BNSF facility; the local fire and police departments; the County Environmental Health Department; the State Office of Emergency Services; the National Spill Response Center; the U.S. Environmental Protection Agency Emergency Reporting Number; the State Water Resources Control Board; the Regional Water Quality Control Board; the California Occupational Safety and Health Department; and spill response contractors.
- A list of the types and locations of emergency equipment at the BNSF facility.
- A County Health Department Business Activities Form that identifies the sizes of storage containers for hazardous materials, including underground and aboveground storage tanks, hazardous wastes, and other regulated substances present at the facility, as well as total volume of materials being stored at the facility.
- A facility contingency plan that summarizes emergency response procedures for the proposed Project in the event of fire, explosion, or other unauthorized release of hazardous substance(s). The plan also includes the following:
  - Emergency evacuation plan
  - Employee hazardous materials training program

- Contracts that are prepared and signed by designated qualified emergency response contractors that identify the scope of services, the types of materials to be handled, and the term of the contract (BNSF Undated).

3.7.2.4.2 BNSF Environmental Compliance Assessments

BNSF's environmental assessment program was developed to protect the environment, to evaluate the company's compliance with federal, state and local regulations, as well as the policies and procedures, and to follow up on any identified issues. BNSF conducts self assessments to evaluate the company's environmental performance each year, and reviews the environmental management practices of existing and potential vendors. Only vendors who are found to meet BNSF standards are approved for use.

BNSF has implemented EPOCH™, an Environmental Management Information System, to expand and enhance the collection, computing, and reporting of environmental data. The facility-based modular database provides a tool for tracking environmentally-related items, such as permits, storage tanks, waste manifests, environmental events, air emissions and open compliance assessment issues. The calendar module tracks permit expiration dates, report deadlines, corrective action plan completion dates, and other time-sensitive elements, and prompts identified personnel of upcoming events on a regular basis (BNSF undated).

3.7.2.4.3 BNSF TRANSCAER® Outreach Program

BNSF participates in the Transportation Community Awareness and Emergency Response (TRANSCAER®) outreach program BNSF provides hazardous materials awareness training to the communities in which BNSF facilities are located. These programs, which include both classroom and hands-on sessions, are designed to promote an understanding of safe transportation of hazardous materials by rail.

BNSF's spill response program delivers resources to the area of the spill in the shortest time possible. The program includes 200 emergency response personnel who are located throughout the BNSF system. All response personnel are required to complete annual responder training. This support team has responsibility for monitoring all emergency responses, mobilizing response and remediation contractors, and lending technical support when necessary. BNSF has also posted a toll-free emergency telephone number at highway/rail crossings to provide the public with a way to contact BNSF immediately in an emergency.

When responding to a spill, information about the spill area and type of material involved is critical. BNSF uses a Geographical Information System (GIS) to provide "point-and-click" information about specific track locations, surrounding communities, emergency responders, healthcare facilities, schools, nursing homes, pipelines, and detailed response procedures. The GIS includes a model for simulating chemical concentrations and "footprints" if a release were to occur. Output from the model includes consideration for complex topography, such as mountains and river valleys.

3.7.2.4.4 BNSF Hazardous Materials Shipment Auditing Program

During each of the last eight years, BNSF has audited approximately 18,000 shipping documents related to hazardous materials shipments. BNSF represents that review and communication of the audit results with its shippers have improved the accuracy and completeness of the shipper waybills.

3.7.2.5 Homeland Security

The following sections provide a discussion of the risk of terrorism-related activities associated with transportation of containerized cargo.

3.7.2.5.1 Terrorism Risk

Until recently, the prospect of an attack on a link in the international goods movement chain would have been considered highly speculative under the California Environmental Quality Act (CEQA) and dropped from further analysis. The climate of the world today has added an additional unknown factor for consideration; i.e., terrorism. Available data do not allow a reasonable estimate of the probability of a terrorist attack on the proposed Project or alternatives. Accordingly, the probability component of the analysis contains a considerable amount of uncertainty, although that fact does not invalidate the analysis. A terrorist action could be the cause of events described in this section such as hazardous materials release and/or explosion. The potential impact of those events would remain as described herein. Hazardous materials release-related issues are discussed in the following sections.

3.7.2.5.2 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 within the Port. The vulnerability of the Port and of port-related facilities can be reduced by implementing security measures. The expected consequences of a terrorist action can be also affected by certain measures such as emergency response preparations.

3.7.2.5.3 Terrorism Risk Associated with Containerized Cargo

Cargo containers could be used to transport a harmful device into the Port intended to cause harm to the Port or to inland targets. This could include a weapon of mass destruction or a conventional explosive. The likelihood of such an attack would be based on the desire to cause harm to the particular target. Containerized cargo represents a substantial segment of maritime commerce and is the focus of much of the attention regarding security measures. Containers are used to transport a wide variety of goods. A large container ship can carry more than 5,000 containers, of which several thousand might be offloaded at a given port.

The use of cargo containers to smuggle weapons of mass destruction through the port intended to harm another location such as a highly populated and/or economically important region is another possible use of a container by a terrorist organization. However, the likelihood of such an event would not be impacted by project-related throughput increases, but would be based on the terrorist's desired outcome. Cargo containers represent only one of many potential methods to smuggle weapons of mass destruction, and with current security initiatives may be less desirable than other established smuggling routes (e.g., land-based ports of entry, cross border tunnels, illegal vessel transportation, etc.).

3.7.2.6 Security Measures at the Port of Los Angeles

Numerous security measures have been implemented at 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 security that includes the security program of the LAHD.

3.7.2.6.1 Security Credentialing

The TWIC program is a TSA and USCG initiative that includes 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 provide additional shoreside security at San Pedro Bay ports' terminals. 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 San Pedro Bay Ports are currently involved in initial implementation of the TWIC program including a series of field tests at selected POLA terminals. In December 2007, Port and long shore workers, truckers, and other personnel at the Ports of Los Angeles and Long Beach began to enroll in the TWIC program (TSA, 2007).

3.7.2.6.2 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 San Pedro Bay Ports. The San Pedro Bay Ports themselves are not subject to the international or federal security regulations discussed in Section 3.7.2.5.1, but all container terminal tenants at both ports are subject to those regulations. The ports do not have responsibilities related to security scanning or screening of cargo entering the port. However, the port security forces may inspect cargo if there is probable cause on a case-by-case basis.

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 (CBP, 2011).

3.7.3 Applicable Regulations and Laws

The following sections provide a list of regulations and laws pertaining to the management of hazardous materials and wastes, and an overview of other pertinent safety issues.

3.7.3.1 Regulations and Laws

Regulations applicable to the proposed Project are designed to regulate hazardous materials and hazardous wastes, as well as to manage sites contaminated by hazardous wastes. These regulations also are designed to limit the risk of upset during the use, transport, handling, storage, and disposal of hazardous materials. The proposed Project

will be subject to numerous federal, state, and local laws and regulations including, but not limited to, those described below.

3.7.3.1.1 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted in 1980 to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes prohibitions and requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified. The corresponding regulation in 42 CFR 103 provides the general framework for response actions and managing hazardous waste.

3.7.3.1.2 Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 6901et seq.)

The goal of RCRA, a federal statute passed in 1976, 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 (HSWA) 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 260-282 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and disposed of hazardous waste.

3.7.3.1.3 DOT Hazardous Materials Regulations (Title 49 CFR Parts 100-185)

The DOT Hazardous Materials Regulations cover all aspects of hazardous materials packaging, handling and transportation. Parts 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications) and 180 (Packaging Maintenance) would all apply to the proposed Project activities.

3.7.3.1.4 Hazardous Materials Transportation Act (HMTA), 49 CFR Part 171, Subpart B

The DOT, FHWA, and the Federal Railroad Administration regulate transportation of hazardous materials at the federal level. The HMTA requires that carriers report accidental releases of hazardous materials (e.g., spills) to DOT at the earliest practical moment

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

This statute is the basic hazardous waste law for California. The Hazardous Waste Control Law (HWCL) 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. The program is administered by the Department of Toxic Substances Control.

3.7.3.1.6 Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 11001 et seq.)

Also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), 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.

3.7.3.1.7 Hazardous Material Release Response Plans and Inventory Law (California Health and Safety Code, Division 20, Chapter 6.95)

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 includes 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 is, in this case, the LAFD. The state has integrated the federal EPCRA reporting requirements into this law; and, once a facility is in compliance with the local administering agency requirements, submittals to other agencies are not required.

3.7.3.1.8 Los Angeles Municipal Code (Fire Protection – Chapter V, Article 7, Divisions 4 and 5)

These portions of the municipal fire 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 the LAFD.

3.7.3.1.9 Los Angeles Municipal Code (Public Property – Chapter VI, Article 4)

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

3.7.3.1.10 Los Angeles Municipal Code (Methane Seepage Regulations – Chapter IX, Article 1)

This portion of the municipal code regulates methane intrusion emanating from geologic formations. The code requires site specific testing and methane gas mitigation systems for the design of any paved area or inhabited structure located in an area identified as a potential methane hazard site.

3.7.3.1.11 City of Carson Fire Prevention Code

The City of Carson Fire Prevention Code was passed on October 4, 2005. According to §3100 of the Code, Title 32 of the Los Angeles County Code (the Fire Code), as amended and in effect on November 1, 2002, constitutes the Fire Prevention Code of the City of Carson. Title 32 is an amended version of the California Fire Code, 2001 Edition (Part 9 of Title 24 of the California Code of Regulations).

3.7.3.1.12 City of Long Beach General Plan - Fire Prevention

The City of Long Beach has adopted the 1971 edition of the Uniform Fire Code with additions. Other codes that impact fire protection within the City include the Housing Code, Electrical Code, and Plumbing Code. From the standpoint of fire safety, building codes and fire prevention codes are the most important. The Building Code applies principally to new construction and alterations, though it is sometimes made retroactive and applied to existing buildings if past deficiencies are discovered to be critical. Once a building is constructed, the Fire Prevention Code governs the maintenance of the building and the introduction of materials into the building for the purpose of fire safety.

3.7.3.1.13 Public Resources Code, Section 3208.1

This state law authorizes the State Oil and Gas Supervisor to order re-abandonment of any previously abandoned well when construction of any structure over or in proximity to the well could result in a hazard. Excavations and construction in the immediate vicinity of abandoned oil wells is regulated in accordance with standards and procedures as set forth by the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR).

3.7.3.2 Other Requirements

California regulates the management of hazardous wastes through Health and Safety Code Section 25100 et seq., and through the California CCR, Title 22, and Division 4.5, Environmental Health Standards for the Management of Hazardous Wastes, as well as CCR Title 26, Toxics.

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

The transport of hazardous materials in containers on the street and highway system is regulated by procedures developed by the California Department of Transportation (Caltrans) and the Standardized Emergency Management System prescribed under Section 8607 of the California Government Code.

Compliance with other federal, state, and local laws and regulations (e.g., driver training and licensing and Caltrans packaging requirements) govern transport of cargo on the street and highway system and during rail transport. The shippers package the hazardous materials in the containers and provide labeling in compliance with Caltrans requirements.

Hazardous materials inside cargo containers fall under the primary jurisdiction of the federal Department of Homeland Security and USCG (33 CFR 126) while the containers are at sea, in port waters, and at waterfront facilities. Under the jurisdiction of the

Department of Homeland Security, the USCG maintains an Office of Operating and Environmental Standards Division, which develops national regulations and policies on marine environmental protection. This division coordinates with appropriate federal, state, and international organizations to minimize conflicting environmental requirements. The USCG also maintains a Hazardous Materials Standards Division (HMSD), which develops standards and industry guidance to promote the safety of life and protection of property and the environment during marine transportation of hazardous materials.

3.7.4 Impacts and Mitigation Measures

3.7.4.1 Methodology

3.7.4.1.1 Risk Probability and Criticality

CEQA guidelines require the lead agency to identify any adverse change in the physical conditions within the area affected by the proposed Project. For spill or release incidents that may adversely affect environmental and public safety, a risk matrix is used to evaluate the expected frequencies of scenarios versus the severity of potential consequences to determine the level of significance (see Table 3.7-1). Spill and/or release incidents that fall in the shaded area of the risk matrix would be classified as significant.

The potential for significant safety impacts increases proportionally to the frequency of occurrence and potential consequences of an event. Frequency is typically classified into six categories (frequent, periodical, occasional, possible, improbable, and extraordinary) based on a predefined expected level of occurrence. The severity of consequence is also classified into five categories (negligible, slight, moderate, severe, and catastrophic) based on the potential environmental and safety impact on the public.

Table 3.7-1 specifies values in each category of consequence and frequency classification typically used in the industry. Incidents that fall in the shaded area of the risk matrix are classified as significant, unless for the lighter shaded areas there are engineering and/or administrative controls in place.

The risk matrix approach follows the Los Angeles County Fire Department (LACFD) risk management guidelines that were originally developed for the California Risk Management and Prevention Program (RMPP) and also includes the criticality classifications presented in Table 3.7-2. The RMPP used the combination of accident frequency and consequences (criticality) to define the significance of a potential accident in terms of impacts to public safety (i.e., potential injuries and/or fatalities). Santa Barbara County (1995) added additional criteria to address the significance of oil spills and environmental hazards. The potential significance of impacts to public safety and the environment from spills and/or releases of hazardous substances are evaluated using the risk matrix approach. The extent of environmental damage is evaluated relative to both construction and operational activities. The matrix shown in Table 3.7-1 combines accident probability with the severity of consequences to identify the risk criticality.

Four categories of risk have been defined by the LACFD as:

1. Critical. Mitigate within 6 months with administrative or engineering controls (to reduce the Risk Code to 3 or less).
2. Undesirable. Mitigate within 1 year with administrative or engineering controls (to reduce the Risk Code to 3 or less).

3. Acceptable. Verify need for engineering controls, or that administrative controls are in place for hazard.
4. Acceptable. No mitigating action required for the identified hazard.

Table 3.7-1. Risk Matrix.

		Probability					
		Extraordinary - > 1,000,000 years	Improbable - >10,000 < 1,000,000 years	Possible - >100 <10,000 years	Occasional >10 and <100 years	Periodic >1 and < 10 years	Frequent > 1/year
Consequences	Catastrophic (> 100 severe injuries or > 357,142 bbl)	4	3	2	1	1	1
	Severe (Up to 100 severe injuries or 2,380-357,142 bbls)	4	3	3	2	2	2
	Moderate (up to 10 severe injuries or 238-2,380 bbl)	4	4	3	3	3	3
	Slight (a few minor injuries or 10-238 bbl)	4	4	4	4	4	4
	Negligible (no minor injuries or <10 bbls)	4	4	4	4	4	4

Notes:
Incidents that fall in the dark shaded area of the risk matrix would be classified as significant in the absence of mitigation, while the lighter shaded areas would be significant in the absence of engineering and/or administrative controls. Un-shaded areas would be considered less than significant.
bbl = barrel which is 42 gallons.
Sources: LACFD 1991, Santa Barbara County 1995, Aspen Environmental Group 1996.

The risk criticality matrix presented in Table 3.7-2 was originally developed for use in evaluating the probability and significance of a release of acutely hazardous materials (AHM) under the requirements of Section 25532(g) of the Health and Safety Code, and has been modified over the years to include other environmental and public safety hazards.

Table 3.7-2. Criticality and Frequency Classifications.

Criticality Classification		
Classification	**Description of Public Safety Hazard**	**Environmental Hazard – Oil Spill Size**
Negligible	No significant risk to the public, with no injuries	Less than 10 bbls (420 gallons)
Slight	At most, a few minor injuries	10-238 bbls (420-10,000 gallons)
Moderate	Up to 10 severe injuries	238-2,380 bbls (10,000-100,000 gallons)
Severe	Up to 100 severe injuries or up to 10 fatalities	2,380-357,142 bbls (100,000-15,000,000 gallons)
Catastrophic	More than 100 severe injuries or more than 10 fatalities	Greater than 357,142 bbls (>15,000,000 gallons)
Frequency Classification		
Classification	**Frequency Per Year**	**Description of the Event**
Extraordinary	< once in 1,000,000 years	Has never occurred but could occur.
Improbable	Between once in 10,000 and once in 1,000,000 years	Occurred on a worldwide basis, but only a few times. Not expected to occur.
Possible	Between once in 100 and once in 10,000 years	Is not expected to occur during the Project lifetime.
Occasional	Between once in 10 and once in 100 years	Would probably occur during the Project lifetime.
Periodic	Between once per year and once in 10 years	Would occur approximately once per decade.
Frequent	Greater than once per year	Would occur once per year on average.

Notes and Abbreviations:
bbl = barrel which is 42 gallons.
Sources: Santa Barbara County 1995; Aspen Environmental Group 1996.

3.7.4.1.2 Hazards Associated with Truck Transportation of Hazardous Materials

The potential impact of increased truck traffic on regional injury and fatality rates has been evaluated. The Federal Motor Carrier Safety Administration (FMCSA), within the U.S. Department of Transportation (DOT), operates and maintains the Motor Carrier Management Information System (MCMIS). MCMIS contains information on the safety fitness of commercial motor carriers and hazardous material shippers subject to the FMCSA Regulations and the 49 CFR Hazardous Materials Regulations. As part of these requirements, reportable accident rates are generated for various types of carriers, including carriers of hazardous materials. More than 500,000 motor carriers are included in the database, of which approximately 40,000 carry hazardous materials. A DOT reportable accident is an accident that produces either a fatality, a hospitalization, or requires the vehicle be towed.

The Hazardous Materials Information System (HMIS) is another system of databases managed by the Office of Hazardous Materials Safety within DOT. The database

maintains information on transportation-related hazardous material incidents. According to an FMCSA detailed analysis (FMCSA, 2001), the estimated nonhazardous materials truck accident rate is more than twice the hazardous materials truck accident rate. The non-hazardous materials truck accident rate was estimated to be 0.73 accidents per million vehicle miles and the average hazardous materials truck accident rate was estimated to be 0.32 accidents per million vehicle miles. Based on the National Highway Traffic Safety Administration (NHTSA) (USDOT, 2003), of the estimated 457,000 truck crashes in 2000 (causing fatalities, injuries, or property damage), an estimated 1 percent produced fatalities and 22 percent produced injuries. The Fatality Analysis Reporting System (FARS) and the Trucks Involved in Fatal Accidents (TIFA) survey were the sources of data for this analysis, which primarily examined fatalities associated with vehicle impact and trauma.

3.7.4.1.3 Hazards Associated with Rail Transportation of Hazardous Materials

Train accidents are required to be reported to the Federal Railroad Administration (FRA). The FRA regulations on reporting railroad accidents/incidents are found primarily in 49 CFR Part 225. The purpose of the regulations is to provide FRA with accurate information concerning the hazards and risks that exist on the nation's railroads. The FRA uses this information for regulatory and enforcement purposes, and for determining comparative trends of railroad safety. These regulations preempt states from prescribing accident/incident reporting requirements.

The FRA compiles data on railroad-related accidents, injuries and fatalities to depict the nature and cause of rail-related accidents and improve safety. Train accident data reported in the United States, in California and accidents reported by BNSF between 2001 and 2010 are summarized in Table 3.7-3.

Based on the train accident data for the United States, the train accident rate varied from 2.7 accidents per million miles traveled to 4.4 accidents per million miles traveled over the 10-year period from January 2001 to December 2010. The train accident rate for 2010 was 2.7 train accidents per million miles traveled. Of the train accidents reported during the 10-year period (a total of 27,415), about 1 percent of the train accidents resulted in a release of hazardous materials (304/27,415 = 0.011 or 1.1%).

Table 3.7-3. Summary of Train Accident Data.

Category	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Train Accident Data for the United States										
Total Accidents/Incidents(1)	16,086	14,403	14,370	14,523	14,311	13,803	13,936	12,953	11,244	11,578
Accident Rate(2)	22.6	19.8	19.3	18.9	18.1	17.0	17.6	16.7	16.8	16.4
Train Accidents	3,023	2,738	3,019	3,385	3,266	2,998	2,693	2,481	1,910	1,902
Train Accident Rate(2)	4.2	3.8	4.1	4.4	4.1	3.7	3.4	3.2	2.9	2.7
Train Accidents on Main Line	1,025	886	976	1,033	1,021	981	854	767	618	618
Accident Rate on Main Line	1.6	1.4	1.5	1.5	1.5	1.4	1.2	1.1	1.1	1.0
Hazmat Releases(3)	32	31	30	31	39	30	46	22	22	21
Cars Carrying Hazmat(4)	6,692	6,616	7,790	8,185	8,034	9,000	8,562	8,451	6,440	7,509
Hazmat Cars Damaged/Derailed	931	980	1,072	998	915	1,047	1,056	751	749	719
Cars Releasing	57	56	41	49	52	71	76	38	44	40
Total Train Miles(5)	711.55	728.67	743.33	770.15	789.03	813.58	793.62	774.06	667.93	704.81
Train Accident Data for BNSF										
Accidents/incidents Reported by BNSF	2,411	2,088	1,972	2,090	2,208	2,042	2,083	1,990	1,611	1,688
Train Accidents Reported by BNSF	623	538	583	672	677	658	629	601	410	445
Hazmat Releases Reported by BNSF	9	5	4	10	10	7	10	6	7	7
Train Accident Data for California										
Total Accidents/Incidents(1)	1,078	1,038	1,002	865	965	944	950	843	720	712
Train Accidents	182	184	175	185	199	191	155	120	101	86
Hazmat Releases	1	1	1	3	2	3	4	1	1	1

Source: Federal Railroad Administration, Office of Safety Analysis data reports. http://safetydata.fra.dot.gov/officeofsafety/publicsite/query/tenyr1a.aspx
(1) Total accident/incidents include train accidents, highway-rail accidents, and other incidents.
(2) Events per million train miles.
(3) Number of accidents involving a hazmat release.
(4) Number of rail cars that released hazardous materials.
(5) Number in million train miles.

3.7.4.1.4 Risk of 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 proposed Project or alternative and, therefore, the probability component of the analysis described in section 3.7.4.1.1 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.

3.7.4.2 Thresholds of Significance

Criteria for determining the significance of impacts related to hazards and hazardous materials are based on the Los Angeles CEQA Thresholds Guide (City of Los Angeles 2006), the State CEQA Guidelines, and federal and state standards, regulations, and guidelines. The proposed Project or alternatives would have a significant impact relating to hazards and hazardous materials issues if it would:

RISK-1 Substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance, as defined in Tables 3.7-1 and 3.7-2.

RISK-2 Substantially increase the probable frequency and severity of consequences to people from exposure to health hazards, as defined in Tables 3.7-1 and 3.7-2.

RISK-3 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

RISK-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

RISK-5 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

RISK-6 Increase the probability of an accidental spill due to project-related modifications, if a tsunami were to occur.

RISK-7 Result in a measurable increase in the probability of a terrorist attack due to project-related modifications, which would result in adverse consequences to the proposed Project site and nearby areas.

3.7.4.3 Impacts and Mitigation

3.7.4.3.1 Construction Impacts

Impact RISK-1a: Construction activities would not substantially increase the probable frequency and severity of consequences to people or property as a result of accidental release or explosion of a hazardous substance.

During construction and demolition activities, fuels, lubricants, and other fluids associated with construction equipment could be spilled or leaked during normal usage, resulting in potential health and safety impacts to construction personnel. Best management practices (BMPs; see Section 2.4.3) and Los Angeles Municipal Code regulations (Chapter V, Article 7, Divisions 4 and 5 and Chapter VI, Article 4) would

govern and safeguard construction crews during these 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 confined areas that would be protected with suitable pollution prevention controls. In addition, BMPs would be used during construction and demolition activities to minimize the runoff of contaminants to surface waters in compliance with the State General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Water Quality Order 2009-0009-DWQ), Project-specific Storm Water Pollution Prevention Plans (SWPPPs), and the compliance requirements of the Los Angeles municipal storm water permit (Order 01-182, as amended).

The proposed Project site is located in an area identified as a potential methane hazard site due to its proximity to methane gas sources such as oil wells and oil fields. As such, methane gas mitigation systems would be incorporated into the design of any paved area or inhabited structure on the Project site, as required by City of Los Angeles Municipal Code (Chapter IX, Article 1). The specific requirements for active and passive mitigation systems would depend upon the concentration of methane gas detected in site-specific testing, as set forth in Table 71 of Municipal Code Chapter IX, which specifies protection levels ranging from I (the least stringent) to V (the most stringent).

As described in Section 3.7.2.2.2, there are numerous utility, petroleum, and other pipelines on and near the Project site. Construction activities potentially resulting in ruptured pipelines could cause releases of substances such as fuels, crude oil, and natural gas that could explode or burn, posing a risk to human health. Releases would also represent a risk of environmental contamination. Before construction commences, pipelines and similar infrastructure would be located and appropriately flagged through standard regional notification services (e.g., the Underground Services Alert system). In those systems, potential subsurface excavations are marked on the surface, and the utility location services, in turn, mark pipelines, cables, and conduits in the construction zone. These procedures would avoid exposure or contact of personnel and equipment, as well as protect pipeline facilities from damage by construction equipment. Although it is not expected that pipelines would need to be relocated, if final design revealed the necessity of doing so, pipeline relocation would be carried out following standard procedures developed by the utility and oil and gas industries. In addition, access to pipelines for maintenance and testing purposes would be maintained throughout, as is customary for construction projects taking place in proximity to utilities.

Groundwater monitoring wells in and near the Project site would be located through coordination with agencies and landowners. Any wells in the zones of construction would be flagged and protected during construction, and arrangements would be made to ensure continual access for monitoring activities.

Impact Determination

Implementation of controls, including BMPs, during construction and demolition would minimize the potential for an accidental release of petroleum products and/or hazardous materials and/or explosion during construction and demolition activities at the proposed Project. Because construction/demolition related spills are not uncommon, the probability of a spill occurring is classified as “frequent” (more than once a year). However, because such spills are typically short-term and localized, mainly due to the fact that the volume of fuel in any single vehicle is generally less than 50 gallons and fuel trucks are limited to 10,000 gallons or less, the potential consequence of such accidents is classified as

"slight" resulting in a Risk Code of 4 that is "acceptable." As a result of the routine engineering controls on construction activities, rupture of pipelines during construction in the harbor area with resultant release of hazardous materials is a "periodic" occurrence, and the consequences of such events are "slight", resulting in a Risk Code of 4 that is "acceptable." Los Angeles Municipal Code regulations would govern and safeguard the handling and storage of hazardous materials, limit runoff of contaminants to surface waters through pollution prevention controls, and require methane gas mitigation systems into the design of any paved area or inhabited structure on the Project site. Therefore, based on the risk codes and given the regulatory requirements that would be in place, construction and demolition would not substantially increase the probable frequency and severity of consequences to people or property as a result of an accidental release or explosion of a hazardous substance. Based on risk criterion RISK-1a, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-2a: Construction activities would increase the probable frequency and severity of consequences to people from exposure to health hazards.

Project-related construction work would involve routine site preparation, grading, excavation, and infrastructure/building construction, during the course of which contaminated soils not previously known and remediated could be encountered. As this is a common occurrence in the redevelopment of industrialized areas, construction contractors would be required to have ensured appropriate training of workers, developed contingencies for responding to contaminated soil, and comply with established measures to protect human health and the environment.

Demolition activities could expose workers to asbestos-containing materials (ACM), lead-containing paint (LCP), and/or other hazardous materials (e.g., mercury-containing switches, equipment containing PCBs), which could involve potential health hazards. Demolition activities would be carried out in accordance with federal, state, and local regulations regarding management of hazardous wastes, including SCAQMD's Rule 1403, Title 40, Code of Federal Regulations (CFR), Title 49, CFR, and California Health and Safety Code Division 20, Chapter 6.5 (see Section 3.7.3), which govern the removal, transport, and disposal of hazardous wastes to minimize health and environmental impacts.

Known or suspected contaminated substances in structures and soil would be removed in accordance with federal, state, and local regulations prior to construction and with appropriate regulatory oversight as necessary (e.g., LAFD, LARWQCB or DTSC), thereby minimizing the exposure of construction workers to contaminants, and minimizing the potential for releases of such substances to the environment. Other than for site remediation, subsurface excavations would be limited to creating foundational supports for buildings and other weight-bearing components of the Project, thereby minimizing the chance that construction personnel would be exposed to on-site soil contamination.

- Nevertheless, the possibility exists that construction activities would encounter unexpected soil contamination or contaminated building materials that could expose workers to health hazards. The site is not adjacent to any populated areas for the public to be exposed to health hazards as a result of contaminated soil and building materials, but on-site construction workers could be exposed. Standard procedures exist for protecting workers from exposure to chemicals of potential concern. For example, OSHA and local regulatory agencies (e.g., SCAQMD and fire departments) mandate controls to limit exposure to workers and the public, including: Use of warning signs and containment areas.
- Worker training.
- Implementation of work plans and health and safety plans.
- Reduction of dust emissions through the use of wet methods.
- Use of personal protective equipment by workers.

All excavation or grading of VOC contaminated soil would be subject to SCAQMD's Rule 1166 requiring that a mitigation plan be developed prior to any excavation work involving VOC contaminated soils, that the plan be approved by SCAQMD, and that regular monitoring be conducted.

Construction activities would involve the use of equipment that contains oil, gas, or hydraulic fluids that could be spilled during normal usage or during refueling. Construction and demolition activities would be conducted in accordance with standard practices and BMPs in accordance with the Los Angeles Municipal Code (Chapter 5, Section 57, Division 4 and 5; Chapter 6, Article 4). 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). Implementation of increased inventory accountability and spill prevention controls associated with this RRP and HMI, such as limiting the types of materials stored and size of packages containing hazardous materials, would limit both the frequency and severity of potential releases of hazardous materials, thus minimizing potential health hazards and/or contamination of soil during construction/demolition activities. These measures would reduce the frequency and consequences of spills by requiring proper packaging for the material being shipped, limits on package size, and thus potential spill size, as well as proper response measures for the materials being handled. All contaminated soil encountered during construction of the proposed Project would be handled, transported, remediated, and/or disposed of in accordance with all applicable federal, state, and local laws and regulations and in accordance with the following conditions under LAHD leasing requirements:

LM RISK-1 Site Remediation Lease Measure. Unless otherwise authorized by the lead regulatory agency for any given site, the Tenant shall address all contaminated soils within the proposed Project boundaries discovered during demolition and grading activities. Contamination existing at the time of discovery shall be the responsibility of the past and/or current property owner. Contamination as a result of the construction process shall be the responsibility of the Tenant and/or the Tenant contractors. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3, and as directed by the lead regulatory agency for the site.

Soil removal shall be completed such that remaining contamination levels are below risk-based health screening levels for industrial sites established by OEHHA and/or applicable action levels (e.g., Environmental Screening Levels, Preliminary Remediation Goals)

established by the lead regulatory agency with jurisdiction over the site. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) and/or risk-based soil assessments for industrial sites, but are subject to the review of the lead regulatory agency. Excavated contaminated soil shall be properly disposed of off-site unless use of such material on site is beneficial to construction and approved by the agency overseeing environmental concerns. All imported soil to be used as backfill in excavated areas shall be sampled to ensure that it is suitable for use as backfill at an industrial site.

LM-RISK-2 Contamination Contingency Plan Lease Measure. The following contingency plan shall be implemented to address contamination discovered during demolition, grading, and construction.

a) All trench excavation and filling operations shall be observed for the presence of free petroleum products, chemicals, or contaminated soil. Soil suspected of contamination shall be segregated from other soil. In the event soil suspected of contamination is encountered during construction, the contractor shall notify the Tenant and the LAHD's environmental representative. The LAHD shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material. Continued work at a contaminated site shall require the approval of the LAHD Project Engineer.
b) Excavation of VOC-impacted soil may require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.
c) The remedial option(s) selected shall be dependent upon a suite of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both off-site and on-site remedial options may be evaluated.
d) The extent of removal actions shall be determined on a site-specific basis. At a minimum, the impacted area(s) within the boundaries of the construction area shall be remediated to the satisfaction of the Tenant, LAHD, and the lead regulatory agency for the site. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.
e) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Port Project Manager within 60 days of project completion.
f) In the event that contaminated soil is encountered, all on-site personnel handling or working in the vicinity of the contaminated material must be trained in accordance with EPA and Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations or demonstrate they have completed the appropriate training. Training must provide protective measures and practices to reduce or eliminate hazardous materials/waste hazards at the work place.
g) When impacted soil must be excavated, air monitoring will be conducted as appropriate for related emissions adjacent to the excavation.

All excavations shall be backfilled with structurally suitable fill material that is free from contamination.

Impact Determination

Contamination will very likely be encountered in soils and building materials, meaning that the probability of its occurrence is classified as “frequent” (more than once a year). It is reasonable to assume that appropriate training of workers is ensured and that

contingencies for responding to contaminated soil and protecting human health and the environment are in place.

Accordingly, the potential consequence of such an occurrence is classified as "slight," resulting in a Risk Code of 4 that is "acceptable," and impacts would be less than significant.

Because construction/demolition-related spills are not uncommon, the probability of a spill occurring is classified as "frequent". However, because such spills are typically short-term and localized, the potential consequence of such accidents is classified as "slight," resulting in a Risk Code of 4 that is "acceptable." Accordingly, spills and upsets during construction/demolition activities associated with the proposed Project would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards, and impacts would be less than significant.

Several standard policies regulate the storage and use of hazardous materials, including the types of materials, size of packages containing hazardous materials, and the separation of containers containing hazardous materials (see Section 3.7.3). These measures reduce the frequency and consequences of spills by requiring proper packaging for the material being shipped, limits on package size, and thus potential spill size, as well as proper response measures for the materials being handled. Many of these requirements are incorporated into construction storm water permits and their associated compliance planning components (see Section 2.4.3 for a discussion of construction-phase BMPs). Implementation of these preventive measures would minimize the potential for spills to impact the public and limit spill effects to a relatively small area, and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-3a: Construction activities would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction and demolition activities would involve the routine transport, use and disposal of hazardous materials. Construction activities would involve the use of equipment that contains oil, gas, or hydraulic fluids that could be spilled during normal usage or during refueling. Demolition activities could involve the remediation of contaminated soils and building materials that could contain ACM, LCP, and/or other hazardous materials (e.g., mercury-containing switches, equipment containing PCBs).

Hazardous wastes from demolition and remedial activities would be transported off-site to an appropriate landfill (based on the level and nature of the contamination) in accordance with DOT and HMTA requirements identified in Section 3.7.3. Transportation would utilize truck routes established in accordance with the traffic management plan (see Section 3.10, Transportation). These designated truck routes would avoid residential streets, which would minimize the possibility of exposure of people to contaminants or the release of contaminants to the environment.

As indicated under Impact RISK-2a above, construction and demolition activities would be conducted using BMPs in accordance with the Los Angeles Municipal Code (Chapter 5, Section 57, Division 4 and 5; Chapter 6, Article 4), as well as the municipal storm water permit (Order 01-182, as amended), the General Construction storm water permit (Order 2009-0009-DWQ), and other regulatory requirements. 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 RRP and HMI. Implementation of increased inventory accountability and spill prevention controls associated with this RRP and HMI, such as limiting the types of materials stored and size of packages containing hazardous materials, would limit the possibility of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Storm water regulations have similar constraints and compliance requirements for hazardous materials storage and use, which would serve as additional compliance safeguards.

The measures described above would reduce the frequency and consequences of spills or releases and would thus minimize the potential hazard to the public or the environment through the transport, use, or disposal of hazardous materials in compliance with applicable regulations.

Impact Determination

The transportation, use, and disposal of hazardous materials and/or wastes would be classified as "frequent" (more than once a year) during construction and demolition activities associated with the proposed Project. However, implementation of the safety measures and a traffic management plan (PC TRANS-1) discussed above would help to reduce the potential hazard to the public and/or environment, which could be classified as "slight" and result in a Risk Code of 4 that is "acceptable." Therefore, construction/demolition activities at the proposed Project would not create a significant hazard to the public or the environment given that the transport, use, or disposal of hazardous materials would be required to comply with regulatory requirements and construction requirements. Based on risk criterion RISK-3a, and given the regulatory and construction requirements that would be in place for dealing with the routine transport, use, or disposal of hazardous materials, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-4a: Construction activities would not create a significant hazard to the public or the environment as a result of the proposed Project being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Several properties within the project site are located on lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SGI, 2006; these lists are known collectively as the Cortese List). As a result of these listings, and because of the long history of industrial activities that have occurred within and adjacent to the proposed Project area, near-surface contaminated soil may be encountered (after remedial clean up actions) during demolition and/or construction activities in the proposed Project area, resulting in potential health hazards to demolition and construction personnel.

Construction and demolition activities would be conducted using BMPs in accordance with the Los Angeles Municipal Code (Chapter 5, Section 57, Division 4 and 5; Chapter 6, Article 4) and applicable storm water permit requirements. In addition, if evidence of soil contamination is encountered during demolition and/or construction activities (e.g., stained soil, noxious odors), such activities would cease until a health risk assessment is performed in accordance with Los Angeles County Fire Department Health Hazardous Materials Division requirements, and appropriate remediation measures would be taken, as necessary, to ensure that workers and the general public are protected from exposure to hazards during demolition of existing improvements and construction of the proposed improvements.

The RCRA and HWCL regulations discussed in Section 3.7.3 require that any contaminated soil excavated or removed from the project site during construction of the proposed improvements be properly disposed of in accordance with regulations and that any hazardous wastes generated by the proposed Project be transported off-site to an appropriate landfill (based on the level of contamination identified) in accordance with DOT and HMTA requirements. The transport of hazardous wastes would be coordinated through a traffic management plan required prior to the start of construction, which would avoid the use of any residential streets.).

Impact Determination

Several standard policies regulate the proper management and disposal of hazardous materials and wastes, including contaminated soil and groundwater. Implementation of these preventive measures would minimize the potential exposure of the public and environment to hazardous materials and/or wastes. Potential exposure of workers to hazardous materials and/or wastes during demolition and construction activities at contaminated sites can be classified as "frequent" (more than once a year). However, implementation of the safety measures and construction requirements discussed above would result in the consequence of this potential exposure as being "slight" resulting in a Risk Code of 4 that is "acceptable." Therefore, construction/demolition activities would not create a significant hazard to the public or the environment as a result of the proposed Project being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Based on risk criterion RISK-4a, and given the regulatory requirements that would be in place for dealing with hazardous materials and wastes located on site, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-5a: Construction activities associated with the proposed Project would emit hazardous emissions or handle hazardous or acutely hazardous substances, or waste within one-quarter mile of an existing or proposed school.

Six existing schools are located within one-quarter mile of the proposed Project site (Figure 2-2). There are no known proposed schools that would be located within one-quarter mile of the proposed Project site. Four of the existing schools are located to the east in the city of Long Beach: Bethune Mary School at 2041 San Gabriel Avenue;

Elizabeth Hudson School/Hudson Child Development Center at 2335 Webster Avenue; Will J. Reid High School at 2152 West Hill Street; and Cabrillo High School at 2001 Santa Fe Avenue. Stephens Middle School at 1830 W. Columbia Street in Long Beach is located to the northeast of the proposed Project site. Wilmington Park Elementary School at 1140 Mahar Avenue in Wilmington is located to the west of the south lead tracks. These schools are all located in residential neighborhoods that would not be situated on a transportation route that would be used by trucks transporting hazardous materials and/or wastes to and from the Project site during demolition and construction activities (see Figure 2-4). Haul routes would be determined through a detailed traffic management plan prior to the start of construction (PC TRANS-1). During site remediation, construction, and demolition activities, wet methods would be used for dust suppression, which would minimize exposure of nearby students to airborne contaminants. During remedial activities, standard procedures for testing and monitoring for toxic emissions would ensure that concentrations of air toxics related to contamination would not exceed regulatory standards. Standard policies that regulate the transport, use and disposal of hazardous materials and wastes would be used, including regulating the types of materials, size of packages containing hazardous materials, and the separation of containers containing hazardous materials.

Impact Determination

Several standard policies regulate the proper management and disposal of hazardous materials and wastes, including contaminated soil and airborne contaminants. Proper implementation of these preventative measures would minimize the potential exposure of students attending schools located within one-quarter mile of the Project site to hazardous materials and/or wastes. Potential exposure of hazardous substances and/or wastes and hazardous air emissions as a result of demolition and construction activities can be classified as "possible". Proper implementation of the safety measures and construction requirements discussed above would result in the consequence of this potential exposure as being "slight" resulting in a Risk Code of 4 that is "acceptable."

Based on the risk code designated for Impact RISK-5a and with the implementation of the safety measures and construction requirements discussed above, construction and demolition activities would not emit hazardous emissions within one-quarter mile of an existing or proposed school. Based on risk criterion RISK-5a, and given the regulatory requirements that would be in place for dealing with hazardous materials and wastes located on site, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impacts.

Impact RISK-6a: Construction activities associated with the proposed Project would not increase the probability of an accidental spill due to project-related modifications, if a tsunami were to occur.

A tsunami assessment of the San Pedro Bay ports revealed that under worst-case conditions, a tsunami would not result in flooding north of boundaries of the Port of Los Angeles (Moffatt & Nichol, 2007), which are approximately one-half mile south of the

Project site. Accordingly, the Project site, including the alternate sites for displaced businesses, would not be affected by a tsunami.

Impact Determination

Based on the study referenced above, if a tsunami were to occur in the vicinity of the Project Site, an increase in the probability of an accidental spill due to construction of the proposed Project would not occur. Based on risk criterion RISK-6a, there would be no impact.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

Impact RISK-7a: Construction activities associated with the proposed Project would not result in a measurable increase in the probability of a terrorist attack due to project-related modifications, which would result in adverse consequences to the proposed Project site and nearby areas.

As stated in Chapter 2, it is assumed that the three businesses that would move to identified alternate locations in the Project area (Fast Lane, ACTA, and California Cartage) would continue to operate on their existing sites while construction of their new facilities occurred. Once construction of the new improvements was completed, these businesses would operate on their new sites or a combination of new and existing sites, in the case of California Cartage and Fast Lane, while demolition of existing facilities and construction of the proposed improvements on the Project site occurred. Based on this information, it is reasonable to assume that fewer containers would be present in the Project site during demolition and construction activities than under baseline conditions. This condition would be the result of containers not being stored on site in areas where demolition and construction activities were occurring, and the fact that some businesses would be operating at reduced levels in preparation for the transition to their new sites.

Hazardous substances would be present on the Project site during construction (e.g., fuels and lubricants, wastes from demolition and remediation, paints and solvents). If released, these substances could pose risks to human health and the environment. None of the substances is expected to be present in large quantities, however. For example, demolition wastes containing volatile or fluid hazardous wastes, such as PCB-containing oils or residual fuels from abandoned storage tanks, would be contained and packaged in accordance with regulatory requirements and regularly transported to appropriate disposal facilities. Although the probability of a terrorist-mediated release cannot be accurately estimated, it is reasonable to assume that such substances would not present an attractive target for terrorist activities. Furthermore, the consequences of any release that did occur would be slight, given the small quantities of hazardous substances that would be involved.

Given these facts, there would be no measurable increase in the probability of a terrorist attack due to project-related construction and demolition. In addition, since the terrorist attacks of September 2001, several security measures have been implemented at the San Pedro Bay ports to enhance general security and cargo screening methods (Section 3.7.2.5). Nevertheless, a terrorist action during construction could block key road access

points and result in economic disruption. A fire associated with a terrorist attack could result in short-term impacts to local air quality. Other potential environmental damage could include fuel spills and the release of hazardous materials into the environment. Impacts of such releases would be limited to the area surrounding the point of attack and would be contained by the construction contractor and local first responders (see Section 3.12).

Impact Determination

Given that there would be no measurable increase in the probability of a terrorist attack occurring during construction of the proposed improvements, and given the localized consequences if any such attack were to occur, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

3.7.4.3.2 Operational Impacts

Operation of the proposed Project and of businesses at the alternate sites (including the types of hazardous materials and wastes that would be generated), the pollution reduction features that would be utilized as part of the proposed Project, and the security measures that would be incorporated into the proposed Project, are described in detail in Chapter 2.

Hazardous substances at the proposed SCIG facility and alternate sites for businesses would fall into two categories: (1) substances used during operation of the proposed facilities such as fuels, solvents, paints, lubricants, batteries, etc.; and (2) cargo contained in some of the shipping containers. It is possible that aboveground and underground fuel storage tanks may be installed at one or more of the alternate business locations. At the proposed SCIG facility, a 1,000-gallon aboveground diesel fuel tank would be installed in the yard hostler maintenance area for refueling purposes. As described in Section 2.4.4.2, there would be no locomotive maintenance at the SCIG facility, no fixed locomotive fueling, and no locomotive fuel storage facility or structures.

Operational substances would be stored and handled in accordance with the facilities' Business Plans, which would be submitted to the LAFD for approval, and, for the SCIG facility, BNSF's corporate hazardous substances management plans (see Section 3.7.2 for details). Those plans incorporate standard practices for storage and handling, notifications, and emergency response.

According to POLA, nearly 20,000 containers of hazardous cargo pass through the San Pedro Bay ports each year. The proposed SCIG facility would handle a portion of those containers, applying established corporate procedures for hazardous cargos (see Section 3.7.2).

Impact RISK-1b: Operations at the proposed Project would not substantially increase the probable frequency and severity of consequences to people or property as a result of accidental release or explosion of a hazardous substance.

As described above, hazardous substances at the proposed SCIG facility and alternate sites for businesses would include (1) substances used during operation of the proposed facility such as fuels, solvents, paints, lubricants, batteries, etc., and (2) cargo contained in some of the shipping containers. In addition, the SCIG facility would also contain a 1,000-gallon aboveground diesel fuel tank for yard hostler refueling. There would be no locomotive maintenance at the SCIG facility and only minor servicing would occur on-site. Operations at the proposed Project would be subject to safety regulations that govern the storage and handling of hazardous materials, which would limit the severity and frequency of potential releases of hazardous materials that could result in increased exposure of people to health hazards (i.e., LAFD regulations and requirements, and DOT regulations). For example, the DOT Hazardous Materials Regulations (Title 49 CFR Parts 100-185) regulate almost all aspects of terminal operations. Parts 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 177 (Highway Transportation), 178 (Packaging Specifications) and 180 (Packaging Maintenance) would all apply to the proposed Project activities. Operational substances at the SCIG facility would also be stored and handled in accordance with the facility's Business Plan, which would be submitted to the LAFD for approval, and BNSF's corporate hazardous substances management plans (see Section 3.7.2 for details). Those plans incorporate standard practices for storage and handling, notifications, and emergency response.

Hazardous materials cargo associated with the proposed Project would be handled and stored in compliance with LAFD requirements and DOT regulations. The transport of hazardous materials in containers on the street and highway system is regulated by Caltrans procedures and the Standardized Emergency Management System prescribed under Section 8607 of the California Government Code. These safety regulations strictly govern the transport of hazardous materials stored in containers (i.e., types of materials and size of packages containing hazardous materials). Implementation of increased hazardous materials inventory control and spill prevention controls associated with these regulations would limit both the frequency and severity of potential releases of hazardous materials.

Maintenance activities would involve the use of hazardous materials such as petroleum products, solvents, paints, and cleaners. Quantities of hazardous materials that exceed the thresholds provided in Chapter 6.95 of the California Health and Safety Code would be subject to an RRP and HMI. Implementation of increased inventory accountability and spill prevention controls associated with the RRP and HMI would limit both the frequency and severity of potential releases of hazardous materials. These plans and policies would apply to Project-related infrastructure and operations, as well as to unrelated facilities such as underground pipelines and other facilities that would continue to operate once the proposed Project is operational. Operation of the proposed Project would not interfere with routine operational or emergency access to such facilities, as access provisions would be included in the Project's design.

Impact Determination

To determine the likelihood of releases from containers at the Project site, operations at the SCIG facility were compared to the container operations at the San Pedro Bay ports. During the period 2006-2009 there were 39 "hazardous material" spills directly associated with cargo containers in the ports of Los Angeles and Long Beach. This equates to approximately 10 spills per year for the entire port complex. It should be noted that during this period there were no reported impacts to the public (injuries, fatalities, and evacuations). During this period, which is considered representative of the baseline,

the total throughput of the container terminals at both ports was nearly 31.4 million TEU. Therefore, the probability of a spill at a container terminal can be estimated at 1.2×10^{-6} per TEU (39 spills divided by 31,423,871 TEU). This spill probability conservatively represents the baseline hazardous material spill probability since it includes materials that would not be considered a risk to public safety (e.g., perfume spills), but would still be considered an environmental hazard (Port of Los Angeles, 2011).

The probability of spills associated with operations at the proposed SCIG facility would be based on the spill probability per TEU times the number of TEUs under the proposed Project. Therefore, during the first year of operation, over two spills (2.5 spills) can be anticipated. Under the maximum capacity in year 11 (2023), over three spills (3.5 spills) can be anticipated on the basis of TEUs. A project spill frequency of more than one would be classified as "frequent" (Table 3.7-2). Because, based on past history, a only a very small possibility exists for injury and or property damage to occur during one of these accidents, the potential consequence of such accidents is classified as "negligible," resulting in a Risk Code of 4 that is "acceptable." The probability of spills at the alternate sites for businesses would be similar to or less than baseline conditions, given that activity levels would be similar or lower than baseline levels.

Compliance with applicable federal, state, and local laws and regulations governing the transport of hazardous materials and emergency response to hazardous material spills, as described above, would minimize the potentials for adverse public health impacts. Maintenance of routine and emergency access to non-project facilities (e.g., underground pipelines) would ensure that risks associated with those facilities would not be increased. Therefore, operation of the proposed Project would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance, and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-2b: Operations at the proposed Project would not substantially increase the probable frequency and severity of consequences to people or property from exposure to health hazards.

The proposed Project is located in an area that currently and historically has been used for heavy industrial purposes (Table 1 in the SGI report in Appendix E). The proposed Project would involve the use and storage of hazardous substances and the generation and disposal of hazardous wastes as identified in Risk-1b above. In addition, workers at the proposed Project would be handling containers in which hazardous materials are being stored.

The potential health hazards to workers at the proposed Project would be similar in nature to the potential hazards that exist currently at the Project site and at the San Pedro Bay ports. Because projected operations at the proposed SCIG facility during the approximately 20-year ramp-up period (2016-2035) would result in a 47 percent increase in containerized cargo compared to the start of operations, the potential for increased truck transportation-related accidents would also occur. Potential project-related

increases in truck trips (at the proposed SCIG facility; truck trips at the alternate sites for businesses would remain the same or be reduced relative to baseline conditions) that could result in an increase in vehicular accidents, injuries, and fatalities prompted an evaluation of the potential impact of increased truck traffic on regional injury and fatality rates.

According to an FMCSA detailed analysis (FMCSA, 2001), the estimated nonhazardous materials truck accident rate is more than twice the hazardous materials truck accident rate. The nonhazardous materials truck accident rate was estimated to be 0.73 accidents per million vehicle miles and the average hazardous materials truck accident rate was estimated to be 0.32 accidents per million vehicle miles. The hazardous material truck accident rate is not directly applicable to the proposed Project container trucks since such trucks are generally limited to bulk hazardous material carriers. Therefore, in order to conduct a conservative analysis, the higher accident rate associated with nonhazardous material trucks was used. Based on information from the National Highway Traffic Safety Administration (DOT, 2003) of the estimated 457,000 truck crashes in 2000 (causing fatalities, injuries, or property damage), an estimated 1 percent produced fatalities and 22 percent produced injuries. The FARS and the TIFA survey were the sources of data for this analysis, which primarily examined fatalities associated with vehicle impact and trauma.

Based on the train accident data for the United States as summarized in Table 3.7-3, the train accident rate varied from 2.7 accidents per million miles traveled to 4.4 accidents per million miles traveled over the 10-year period from January 2001 to December 2010. The train accident rate for 2010 was 2.7 train accidents per million miles traveled. Of the train accidents reported during the 10-year period (a total of 27,415), about 1 percent of the train accidents resulted in a release of hazardous materials (304/27,415 = 0.011 or 1.1%). The FRA compiles data on railroad-related accidents, injuries and fatalities to depict the nature and cause of rail-related accidents and improve safety.

Impact Determination

OSHA and local regulatory agencies (SCAQMD and fire departments) mandate the use of controls to limit exposure to workers and the public from chemicals of potential concern through the use of various controls, including the following:

- Use of warning signs and containment areas.
- Implementation of work plans and health and safety plans.
- Reduction of dust emissions through the use of wet methods.
- Use of personal protective equipment by workers.

Truck Trips

Based on the Port's air pollutant emission inventory, it was determined that the average truck trip from the Port was approximately 49 miles (Starcrest Consulting Group, 2003). Given the annual number of truck trips associated with the proposed Project, the average distance of each trip, which is assumed to be 3.9 miles, and the published accident, injury and fatality rates (above), the truck accident probabilities were calculated and are presented in Table 3.7-4.

Table 3.7-4. Existing and Projected SCIG Truck Accidents.

Operations	Annual One-Way Truck Trips	Accident Rate (per year)	Injury Probability (per year)	Fatality Probability (per year)
2010 (Baseline)	515,349	18.0	4.0	0.2
2016	1,452,000	51.3	11.3	0.5
2023	1,995,000	71.4	15.7	0.7

Because the projected truck accidents associated with the SCIG facility occur at a frequency greater than one per year, truck accidents are considered a "frequent" event. The possibility for injury to occur during one of these accidents means that the consequence of such accidents is classified as "moderate" (up to 10 severe injuries per year) to "severe" (up to 100 severe injuries per year), resulting in a Risk Code of 3 at opening year (2016) and Risk Code 2 at full operation (2035 and thereafter). Risk Code 2 is considered significant in the absence of mitigation and Risk Code 3 is considered significant in the absence of engineering and/or administrative controls. Truck accidents associated with operations on the alternate sites for businesses would be unchanged or reduced from baseline conditions.

A newer truck fleet would service the proposed Project (through the San Pedro Bay ports' Clean Truck Program), which would result in fewer accidents as newer trucks are more reliable than older trucks. The TWIC program also will help identify and exclude truck drivers that lack the proper licensing and training. Using newer trucks reportedly reduces the probability of accidents that occur as a result of mechanical failure by approximately 10 percent (ADL, 1990). In addition, proper driver training, or more specifically, the reduction in the number of drivers that do not meet minimum training specifications, would reduce potential accidents. The combination of newer and more reliable trucks under the Clean Trucks Program and participation in the TWIC program would reduce the Risk Code to 3 (moderate).

Train Trips

The estimated existing accident rate for trains based on national averages was about 2.7 accidents per million miles traveled (Section 3.7.4.1.3, Table 3.7-3). Based on these statistics and projected train trips from the Hobart Yard and the proposed Project, the potential rate of train accidents can be estimated and evaluated. The proposed Project was analyzed at the full capacity of the SCIG facility and compared to baseline 2010 direct intermodal train trips from the Hobart Yard (Table 3.7-5). The average train trip from the Hobart Yard to the California border is approximately 240 miles and the average train trip from the SCIG facility to the California border is approximately 260 miles. Given the annual number of rail trips, the average distance of each trip, and the published accident rate, the estimated probability of hazardous material releases would increase from 0.01 to 0.04 per year (Table 3.7-5).

Table 3.7-5. Existing and Projected Project Rail Accidents.

Operations	Annual Rail Trips[1]	Increase over CEQA Baseline (%)	Accidents[2] (per year)	HazMat Release Probability (per year)
CEQA Baseline (2010)	2,066	--	1.3	0.01
Proposed Project (2035)	5,760	179	4.0	0.04

(1) One-way trips
(2) 2.7/1,000,000 x 260 miles x rail trips (SCIG); 2.7/1,000,000 x 240 miles x rail trips (Hobart).

The occurrence of rail accidents associated with the proposed Project would be considered a "frequent" event because an accident would be expected to happen more than once a year. The possibility exists for a hazardous materials release during one of these accidents, as noted in Table 3.7-5. Many containers handled by the SCIG facility would not transport hazardous materials and most that transport hazardous materials would not do so in bulk. Accordingly, the consequence of such accidents would be classified as "minor" as the volume of material that would be released from a container would be less than 10,000 gallons, and such releases would have a risk code of 4 (Acceptable).Accordingly, due to the programs that would be adopted as part of the proposed Project, and adherence to regulatory requirements discussed in Section 3.7.3, operation of the proposed Project would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards. Potential impacts would be considered less than significant under criterion RISK-2b.

Mitigation Measure

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-3b: Operations at the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Operations at the SCIG facility would involve the routine transport, use and disposal of hazardous materials. Activities would involve the use of equipment that contains oil, gas, or hydraulic fluids that could be spilled during normal usage or during refueling. Operations would involve the storage and use of petroleum products, paints, solvents, and batteries, and the generation of petroleum waste, solvent waste and used batteries requiring disposal. Businesses that are assumed to move to the alternate sites would have similar operations as those described above.

Operation of the proposed Project would be conducted using BMPs and in accordance with the Los Angeles Municipal Code (Chapter V, Article 7, Division 4 and 5; Chapter VI, Article 4). Standard BMPs would include introducing measures (e.g., secondary containment) to minimize runoff of contaminants in compliance with a Project-specific industrial SWPPP (i.e., one that conforms to Order 97-03-DWQ: *Waste Discharge*

Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities).

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 RRP and HMI. Implementation of increased inventory accountability and spill prevention controls associated with this RRP and HMI, such as limiting the types of materials stored and size of packages containing hazardous materials, would limit the possibility of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The transportation of hazardous materials by rail and truck is addressed in Impacts RISK-1b and RISK-2b, above.

Impact Determination

Several standard policies regulate the transport, use and disposal of hazardous materials and wastes including the types of materials, size of packages containing hazardous materials, and the separation of containers containing hazardous materials. These measures are discussed above under Impact RISK-2b and would reduce the frequency and consequences of spills by requiring proper packaging for the material being shipped, limits on package size, and thus potential spill size, as well as proper response measures for the materials being handled. Proper implementation of these preventative measures would minimize the potential hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The transportation, use, and disposal of hazardous materials and/or wastes would be classified as "frequent" (more than once a year) during operation of the proposed Project. However, implementation of the safety measures discussed above would reduce the potential hazard to the public and/or environment to a classification of "slight," resulting in a Risk Code of 4 that is "acceptable." Therefore, operational activities at the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Based on risk criterion RISK-3b, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-4b: Operations at the proposed Project would not create a significant hazard to the public or the environment as a result of the proposed Project being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Several properties within the proposed Project site are located on lists of hazardous materials sites (collectively known as the Cortese List) compiled pursuant to Government Code Section 65962.5 (SGI, 2006). As a result of these listings, and because of the long history of industrial activities that have occurred within and adjacent to the proposed Project area, near-surface soil may be contaminated with petroleum products, metals, solvents, PCBs and other contaminants of concern. However, contaminated soil

encountered during demolition and construction activities would be remediated prior to the implementation of operations at the proposed Project area. Therefore, operations at the proposed Project would not create a significant hazard to the public or the environment as a result of the proposed Project being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Impact Determination

Several standard policies regulate the proper management and disposal of hazardous materials and wastes, including contaminated soil. Implementation of these preventative measures would minimize the potential exposure of the public and environment to hazardous materials and/or wastes. Potential exposure of workers to contaminated soil from past activities at the Project site would be classified as "occasional" (between 10 and 100 years). However, implementation of the safety measures discussed above would result in the consequence of this potential exposure as being "slight" resulting in a Risk Code of 4 that is "acceptable." Therefore, operation of the proposed Project would not create a significant hazard to the public or the environment as a result of the proposed Project being located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Based on risk criterion RISK-4b, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-5b: Operations at the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous substances, or waste within one-quarter mile of an existing or proposed school.

Four schools are located within one-quarter mile east of the proposed Project in the city of Long Beach: Bethune Mary School at 2041 San Gabriel Avenue; Elizabeth Hudson School/Hudson Child Development Center at 2335 Webster Avenue; Will J. Reid High School at 2152 West Hill Street; and Cabrillo High School at 2001 Santa Fe Avenue. Stephens Middle School at 1830 W. Columbia Street in Long Beach is located to the northeast of the proposed Project site. Wilmington Park Elementary School at 1140 Mahar Avenue in Wilmington is located east of the south lead tracks. These schools are all located in residential neighborhoods that would not be situated on a transportation route that would be used by trucks transporting hazardous materials and or wastes to and from the Project site during operations (see Figure 2-4). The alternate sites for businesses are all farther from schools than the sites on which those businesses are currently operating.

Standard policies that regulate the transport, use, and disposal of hazardous materials and wastes would be implemented by the proposed Project, including regulating the types of materials, size of packages containing hazardous materials, and the separation of containers containing hazardous materials (see RISK-2b).

Emissions from operation of the proposed Project are considered in Section 3.2, Air Quality.

Impact Determination

The impacts on public schools of hazardous air emissions associated with operational activities are considered in Section 3.2.

Several standard policies regulate the proper management and disposal of hazardous materials and wastes. Implementation of these preventative measures would minimize the potential exposure of students attending schools located within one-quarter mile of the Project site to hazardous materials and/or wastes. Potential exposure to hazardous substances and/or wastes as a result of operations at the SCIG facility can be classified as "improbable" (>10,000 and <1,000,000 years). However, implementation of the safety measures discussed above would result in the consequence of this potential exposure as being "slight" resulting in a Risk Code of 4 that is "acceptable," and impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

Impact RISK-6b: Operational activities associated with the proposed Project would not increase the probability of an accidental spill due to project-related modifications, if a tsunami were to occur.

A tsunami assessment of the San Pedro Bay ports revealed that under worst-case conditions, a tsunami would not result in flooding north of boundaries of the Port of Los Angeles (Moffatt & Nichol, 2007).

Impact Determination

Based on the study referenced above, if a tsunami were to occur, an increase in the probability of an accidental spill due to effects of flooding on operation of the proposed Project would not occur. Based on risk criterion RISK-6b, no impacts would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impact.

Impact RISK-7b: Operational activities associated with the proposed Project would not result in a measurable increase in the probability of a terrorist attack due to project-related modifications, which could result in adverse consequences to the proposed Project site and nearby areas.

The proposed SCIG facility would operate 24 hours a day, 7 days per week, 360 days per year. As described in Chapter 2, several security measures have been designed as part of

the proposed Project to minimize the threat associated with management of hazardous materials and potential terrorist threat situations. These measures include:

- Portal Entry Checkpoint
- Facility Checkpoint
- Portal Exit Checkpoint
- Automated Kiosk
- Facility Lighting
- Trained Security Personnel.

In addition, a recent analysis of terrorism risk conducted at a nearby proposed marine terminal (Port of Los Angeles, 2007) concluded that terrorism risk associated with container terminals is not influenced by changes in container traffic volume. According to the analysis, an increase in the number of container vessels visiting the POLA terminal would not change the probability or consequences of a terrorist attack since the terminal, including the shipping containers, is already considered a potential target for terrorist activity, as well as a potential mode to smuggle a weapon into the United States.

Containers have been handled and stored at the Project site for years, meaning that the site has already been a potential economic target and a potential mode to smuggle weapons into the United States. Using the logic set forth above, even though the proposed Project would result in an increase in the volume of container traffic to the Project site, that change would not increase either the risk or the consequences of a terrorist action at the site.

Impact Determination

The increase in activity at the Project site would not increase either the risk of a terrorist attack or the consequences of such an attack. Based on risk criterion RISK-7b, therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

3.7.4.4 Summary of Impact Determinations

Table 3.7-6 summarizes the impacts of the proposed Project related to hazards and hazardous materials. No significant impacts were identified.

3.7.4.5 Mitigation Monitoring

No mitigation monitoring is required; however the lease requirements for Site Remediation and Contamination Contingency Plan are included for tracking and reporting purposes and are shown in Table 3.7-7.

3.7.5 Significant Unavoidable Impacts

No significant unavoidable impacts are associated with hazards and hazardous materials.

Table 3.7-6. Summary of Impacts and Mitigation Related to Hazards and Hazardous Materials.

Threshold	Impact Determination	Mitigation Measures	Residual Impacts After Mitigation
RISK-1: The proposed Project would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-2a: Construction activities would increase the probable frequency and severity of consequences to people from exposure to health hazards. **RISK-2b**: Operations at the Proposed Project would not increase the probable frequency and severity of consequences to people from exposure to health hazards.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-3: The proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-4: The proposed Project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-5: The proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less than significant impact	Mitigation not required	Less than significant impact
RISK-6: The proposed Project would not increase the probability of an accidental spill due to project-related modifications, if a tsunami were to occur.	No impact	Mitigation not required	No impact
RISK-7: The proposed Project would not result in a measurable increase in the probability of a terrorist attack due to project-related modifications, which would result in adverse consequences to the proposed Project site and nearby areas.	Less than significant impact	Mitigation not required	Less than significant impact

Table 3.7-7. Lease Measure Tracking for Hazards.

RISK-4a: Construction activities would not create a significant hazard to the public or the environment as a result of the proposed Project being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	
Lease Measures	**LM RISK-1 Site Remediation Lease Measure.** Unless otherwise directed by the lead regulatory agency for any given site, the Tenant shall remediate all contaminated media within proposed Project boundaries that are encountered and managed during demolition and grading activities. Any discolored and/or odorous soil encountered during excavation shall be handled and disposed in compliance with local, state, and federal regulations, as described in Section 3.12.3, and as directed by the Los Angeles Fire Department, DTSC, and/or RWQCB. Excavated contaminated soil shall not be placed in another location on-site; it must be properly disposed of off-site. All imported soil to be used as backfill in excavated areas should be sampled to ensure that the soil is free of contamination. Current Los Angeles Harbor Department import soil guidance documents must be followed and all import soil must meet criteria as defined in those documents. Unless otherwise authorized by the lead regulatory agency for any given site, areas of soil contamination shall be remediated prior to, or in conjunction with, project demolition, grading, and construction. Existing groundwater contamination encountered during the excavation within the boundary of the proposed Project shall continue to be monitored and remediated, simultaneous and/or subsequent to site redevelopment, in accordance with direction provided by the RWQCB or lead regulatory agency. **LM RISK-2 Contamination Contingency Plan Lease Measure**. The following contingency plan shall be implemented by the Tenant to address previously unknown contamination during demolition, grading, and construction: a. All excavation and filling operations within the boundaries of the construction area shall be observed for the presence of free petroleum products, chemicals, or otherwise chemically impacted soil (CIS). Deeply discolored soil, suspected contaminated soil, or soil registering greater than 50 ppmv when measured with a photoionization detector (PID) or organic vapor analyzer (OVA) shall be segregated from clean soil. In the event unexpected suspected chemically impacted material (soil or water) is encountered during construction, the contractor shall notify the Los Angeles Harbor Department's Chief Harbor Engineer and Director of Environmental Management (EMD). Harbor Department EMD personnel shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material(s). Continued work at a contaminated site shall require the approval of the Chief Harbor Engineer. b. A photoionization detector (or other similar devices) shall be present during grading and excavation of suspected chemically impacted soil. c. Excavation of VOC-impacted soil (defined as soil which registers a concentration of 50 ppm or greater of Volatile Organic Compounds as measured before suppression materials have been applied and at a distance of no more than three inches from the surface of the excavated

	soil with an organic vapor analyzer calibrated with hexane) will require the Tenant to obtain and comply with a South Coast Air Quality Management District Rule 1166 permit. d. The remedial option(s) selected shall be dependent upon a number of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both off-site and on-site remedial options shall be evaluated. e. The extent of removal actions shall be determined on a site-specific basis. At a minimum, the chemically impacted area(s) within the boundaries of the construction area shall be remediated to the satisfaction of the lead regulatory agency for the site and/or to ensure protection of project workers. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete. f. Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Chief Harbor Engineer within 30 days of project completion. g. In the event that contaminated soil is encountered, all on-site personnel handling or working in the vicinity of the contaminated material shall be trained in accordance with Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations. These regulations are based on CFR 1910.120 (e) and 8 CCR 5192, which states that "general site workers" shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the work place. h. In cases where potential chemically impacted soil is encountered, a real-time aerosol monitor shall be placed on the prevailing downwind side of the impacted soil area to monitor for airborne particulate emissions during soil excavation and handling activities. i. All excavations shall be filled with structurally suitable fill material which is free from contamination (i.e., meets the criteria in current LAHD import soil guidance documents).
Timing	During the Project Construction period (2013-2015)
Methodology	Lease measures will be required in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	BNSF construction contractor(s) for SCIG and construction contractor(s) for Tenants on alternate sites will be responsible for implementing the lease measures in the contract specifications reviewed and approved by LAHD Environmental Management Division.
Residual Impacts	Less than significant