Chapter 3.14
Risk of Upset

3.14.1 Introduction

This section describes impacts to public health and safety posed by the proposed development of the marina and other associated improvements. Potential impacts include fires, explosions, and releases of hazardous materials from activities associated with the construction and operation of the project facilities.

3.14.2 Setting

3.14.2.1 Regional Setting

The project site is currently used for marinas, boatyards, and the dry storage of small boats, or it is undeveloped. The area around the project site is used for recreation, the handling of dry bulk or break-bulk cargo and storage sheds, the San Pedro Boat Works, undeveloped land, and parking.

Construction

Existing buildings and structures at the site will be demolished and cleared away before new construction begins. These buildings and structures may contain asbestos.

During construction of the development, various types of construction equipment will be employed at the site. Hazardous materials of various kinds (lube oils, gasoline, diesel, and solvents) can be expected to be present at the site to service the construction equipment.

Operation

Under the development plans, a variety of improvements, facilities, and activities are planned for the project. The potential for environmental impacts associated

with upset conditions and non-routine release for operations at this location could be caused by various incidents including natural disasters, human error, and mechanical error.

The existing marina facilities will be demolished and replaced with new, modern floating dock systems. The new marina will replace 465 existing slips with 675 new slips for the berthing of a wide size range of vessels. Docks at the south end of the project site are contemplated for use by the fire department/life guards.

The development features a retail commercial complex, the makeup of which will be determined after consultation with community focus groups. These shops may store and sell small qualities of hazardous substances associated with maritime use (chlorinated solvents, petroleum products, paints, etc.) and household use (drain openers, cleaners, insecticides, etc.).

A 20,000-square foot marine self-storage facility will provide boaters with secure and convenient storage for miscellaneous items. The storage could be used by individuals for storage of hazardous substances associated with maritime use (chlorinated solvents, petroleum products, and paints) and household use (drain openers, cleaners, and insecticides).

The development also includes a large storage building for the stacked storage of approximately 1,000 boats, as well as state-of-the-art amenities and services. These services include: launching facilities, water slips, fuel and provisions options, a multi-tenant repair and service building, and parking. The stored boats could contain gasoline in their fuel tanks when they are placed in storage. The repair and service building would contain hazardous substances associated with maritime use (chlorinated solvents, petroleum products, paint stripers, paints, compressed oxygen, and compressed acetylene).

The fuel dock will consist of one 10,000-gallon aboveground storage tank for gasoline and one 10,000-gallon aboveground storage tank for diesel with associated pipelines, pumps, and dispensers. Various other hazardous materials associated with maritime use (chlorinated solvents, oil, and petroleum distillates) will also be present at this facility.

Fire Protection Service

Fire protection at the Port is provided by the LAFD. The LAFD facilities include land-based fire stations and fireboat companies located in the vicinity of the project. The capabilities of the LAFD to serve the project area are described in Chapter 3.12, “Public Services and Utilities.”

3.14.2.2 Regulatory Setting

There are a number of regulations at the federal, state, and local level governing the handling, storage, and use of hazardous materials.

South Coast Air Quality Management District Rule 1403. Asbestos Emissions from Demolition/ Renovation Activities

This rule is designed to limit asbestos emissions from building demolition activities. The rule requires buildings to be surveyed for asbestos-containing material (ACM) before building demolition, and also mandates ACM removal procedures to limit emissions.

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

This state law requires businesses to develop a Release Response Plan for hazardous materials emergencies if they handle more that 500 pounds, 55 gallons, or 200 cubic feet of hazardous materials. In addition, the business must prepare a Hazardous Materials Inventory of all hazardous materials stored or handled at the facility over the above thresholds. Also, all hazardous materials must be stored in a safe manner.

This law is designed to reduce the occurrence and severity of hazardous materials releases. An exemption exists for facilities (retail stores) handling hazardous materials contained solely in a consumer product and pre-packaged for direct distribution to, and use by, the general public.

Before a new certificate of occupancy is issued to a business that must comply with this law, the local agency must find that the business is in compliance with this law or the certificate will be denied.

Both the Release Response Plan and the Hazardous Materials Inventory must be supplied to the Certified Unified Program Agency (CUPA) for the program. In this case, the CUPA is the LAFD.

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

This is the basic hazardous waste law for California. It establishes the criteria for defining hazardous waste, and its safe handling, storage, treatment, and disposal. The law is designed to provide a cradle-to-grave management of hazardous wastes, as well as to reduce the occurrence and severity of hazardous materials releases. The program is administered by the LACFD.

Aboveground Storage of Petroleum (California Health and Safety Code, Chapter 6.67)

This state law regulates how aboveground petroleum storage tanks are to be constructed, installed, operated, and monitored. This law is designed to prevent the release of hazardous materials into the environment by either leakage from tanks and associated pipelines or from overfilling and spillage. As such, the program works to reduce the occurrence of hazardous materials releases.

Los Angeles Municipal Code (Fire Protection – Chapter 5, Section 57, 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 insure 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.

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

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

Port of Los Angeles Risk Management Plan

Potential health and safety impacts are associated with activities within the Port area that involve the transfer, handling, and storage of hazardous materials in liquid bulk form. The hazards presented by these materials during an accidental release include possible fire and explosion, and the possible release of toxic materials to the atmosphere. To minimize the impacts of accidents on vulnerable

resources in the Port area, the California Coastal Commission and the LAHD have developed a Risk Management Plan. The Risk Management Plan is an element of the PMP. The Risk Management Plan contains policies to guide future development in the Port in an effort to eliminate the danger of such accidents to vulnerable resources. This is to be achieved mainly through physical separation as well as through facility design factors, fire protection, and other risk management methods.

3.14.3 Impacts and Mitigation

Potential impacts to public health and safety include fires, explosions, the accidental release of hazardous materials, and interference with emergency response plans.

3.14.3.1 Methodology

Impacts from risk of upset are evaluated through a qualitative assessment of the potential for the project features to result in potential release or exposure to hazardous materials or explosion. The potential of exposing project-related features, residents (liveaboards) and visitors to hazardous conditions from existing facilities on the project site and in the surrounding area is also assessed. Specific attention is paid to "vulnerable" resources that are at most risk of upset, and whether the project is consistent with the Port Risk Management Plan, emergency and evacuation plans, and other applicable regulations.

3.14.3.2 Thresholds of Significance

According to the *Draft Los Angeles CEQA Thresholds Guide* (City of Los Angeles 1998), the determination of significance for risk of upset shall be made on a case-by-case basis, considering the following factors:

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

Based on these factors, the following significance thresholds are used in this Recirculated Draft SEIR to determine whether a project would have a significant impact from risk of upset.

UPSET-1: The proposed project would not comply with applicable regulations and policies guiding development within the Port.

UPSET-2: The proposed project would substantially increase the probable frequency and severity of consequences to people or property from exposure to the health hazard as a result of a potential accidental release or explosion of a hazardous substance.

UPSET-3: Construction or operation activities would substantially interfere with emergency response plans or emergency evacuation plans, thereby increasing risk of injury or death.

UPSET-4: The project would increase the frequency or severity of an accidental release or explosion of hazardous materials thereby increasing risk of injury or death.

To determine the risk of an accidental release of hazardous materials, or fire or explosion, the LACFD risk matrix (Los Angeles County Fire Department 1991) is employed. The probability of an occurrence has been divided into five categories.

A. **Frequent:** 0 to 1 years; more than once a year.

B. **Periodic:** Every 1 to 10 years; at least once each decade.

C. **Occasional:** Every 10 to 100 years; probably during the lifetime of the plant.

D. **Possible:** Every 100 to 10,000 years; not expected, but could occur.

E. **Improbable:** Not for 10,000 or more years; not expected or likely to occur at all.

It is also necessary to classify accidents according to their severity of consequences to people or property. There are four categories of LACFD classifications.

I. **Catastrophic:** Results in death (or damage and production losses > $1 million).

II. **Severe:** Results in multiple injuries (or losses between $100,000 and $1 million).

III. **Moderate:** Results in a single injury (or losses between $10,000 and $100,000).

IV. **Slight:** Results in operational problems only (or losses < $10,000).

The risk criticality matrix shown in Table 3.14-1 combines accidental 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 control (to reduce the Risk code to 3 or less).
2. **Undesirable:** Mitigate within 1 year with administrative or engineering control (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 action required for the identified hazard.

Impacts for accidental releases are considered to be significant if the risks fall in categories 1 or 2 on the risk matrix.

Table 3.14-1. Risk Criticality Matrix

Severity of Consequence	A Frequent	B Periodic	C Occasional	D Possible	E Improbable
I. Catastrophic	1	1	2	4	4
II. Severe	1	3	3	4	4
III. Moderate	2	3	4	4	4
IV. Slight	4	4	4	4	4

3.14.3.3 Project Impacts

Direct and Indirect Impacts

Impact UPSET-1: The Proposed Project Would Comply with Applicable Regulations and Policies Guiding Development Within the Port

As discussed above under Section 3.14.2.2, "Regulatory Setting," the proposed project is subject to several regulations for development and operation of the project facilities. Because these are requirements that have oversight by various agencies, the LAHD cannot avoid compliance with these regulations. These regulations must be adhered to during design, construction and throughout operation of the project.

The LAHD maintains compliance with these state and federal laws through a variety of methods, including internal compliance reviews, preparation of regulatory plans, and agency oversight. Most notably, the Port of Los Angeles Risk Management Plan implements guidelines for development in the Port in an

effort to eliminate the danger of such accidents to vulnerable resources. This is to be achieved mainly through physical separation as well as through facility design factors, fire protection, and other risk management methods. The proposed project would not involve the placement of "vulnerable" receptors within the hazard footprint of significant hazardous facilities.

The development plans will be reviewed by the LAFD for conformance to fire code. Buildings will be equipped with fire protection equipment as required by the current fire code. The access to all buildings and adequacy of road and fire lanes will be reviewed by the LAFD to insure that adequate access is provided. Plans are included in the development to restripe and widen roads within the development area if necessary. Therefore, impacts are less than significant.

Mitigation Measures
No mitigation is required.

Residual Impact
Impacts would be less than significant.

Impact UPSET-2: The Proposed Project Would Not Increase the Probable Frequency and Severity of Consequences to People or Property from Exposure to Health Hazards as a Result of a Potential Accidental Release or Explosion of a Hazardous Substance

Potential risk of upset could occur from a variety of sources, including construction activities, operational marina activities, fuel docks, retail components, self-storage facilities, and the dry stack storage and boatyards. Each of these is discussed separately below.

Construction
Existing buildings and structures at the site will be demolished and cleared away before new construction begins. These buildings and structures may contain asbestos, which could be released during demolition and pose a potentially significant impact to workers. Under SCAQMD Rule 1403, buildings and structures will be surveyed for ACMs before demolition begins. If ACMs are found, they will be removed under the requirements in Rule 1403 in a way to limit release into the environment. There will be no significant impact from this activity.

As is typical with construction projects in the Port, hazardous materials will be present at the construction site. Most hazardous materials on site during construction are expected to be present in small quantities. The greatest quantity of hazardous materials is expected to be fuel, both gasoline and diesel. Fuel trucks will come to the site to refuel construction equipment, usually on a daily basis (J. Reed pers. comm.). The typical capacity of such trucks is approximately 4,000 gallons, and their operation is regulated by the LAFD. There are no

incidents on record of a significant hazardous materials spill at a construction site within the Port in the last ten years, nor is there any record of an incident involving a fuel truck at a construction site for the last ten years. The severity of consequences for this situation is "Slight" and the frequency of occurrence is "Possible." Under the above significance criteria, there is no significant impact from this activity.

Marina Improvements

The vessels berthed at the marina have the potential to catch fire due to the presence of fuel on-board. However, the present marina presents the same risk of vessel fire. There have been no significant fires or explosions at the current marina. Although the number of vessels docked at the marina would increase due to the 145 additional slips in the proposed project, the new marina will have modern equipment and meet current fire code requirements for fire protection. These measures would lessen the probability of fire and its severity. This project element will be an improvement over the present condition and will not have a significant impact.

Fuel Dock

The storage of petroleum fuels aboveground entails a risk of fire, explosion, or release into the environment. In any case, proper handling and storage, which are required by various rules and regulations (see Section 3.14.2.2 above), reduce the probability of such occurrences. Experience has shown that releases of petroleum fuels are either the result of damage to the tank and/or associated piping, or the result of overfilling and spillage during delivery. Such releases usually do not lead to fire or explosion, and such an event would be "Improbable." While a vehicle could strike the fuel dispensers thereby causing a fire and explosion, such an event is unlikely and the probability of occurrence is only "Possible."

There is a possibility that the storage container could be damaged by vehicle impact or other events, leading to an explosion and/or fire. Chapter 6 of the Los Angeles City Municipal Code requires that an aboveground storage tank be contained within an enclosure capable of containing 110% of the volume of the tank. Such an enclosure would isolate the tanks from vehicle collision and would limit the spread of any release of fuel resulting from a tank failure, accident, or operational error. The safeguards required in the Los Angeles City Municipal Code would reduce the probability of a fire or explosion to "Possible."

Under either of the two above scenarios, if a fire and explosion did occur at the fuel dock, the consequences could be "Severe." Under the above significance criteria, there is no significant impact from this project element.

Marina Village Retail Center

A retail commercial complex could include shops that would store and sell small quantities of hazardous substances associated with maritime use (chlorinated solvents, petroleum products, and paints) and household use (drain openers, cleaners, insecticides, etc.). Chapter 6.95 of the California Health and Safety Code contains an exemption for retail operations handling hazardous materials

contained solely in a consumer product and pre-packaged for direct distribution to the general public. To comply with this exemption, retail operations generally have limited the amounts of hazardous materials stored on site. The toxicity or other hazards posed by the hazardous materials present in consumer products are limited by consumer product regulations at the state and federal level. The lack of widespread operational use of hazardous materials, except for housekeeping activities, makes it "Improbable" that a major hazardous material release will occur in these types of operations. The nature and quantity of hazardous materials present make the severity of consequences of any release "Slight." Under the above significance criteria, there is no significant impact from this project element.

Marine Self-Storage Facility

A 20,000-square foot facility will provide boaters with secure and convenient storage for miscellaneous items. The storage could be used by individuals for storage of hazardous substances associated with maritime use (chlorinated solvents, petroleum products, and paints) and household use (drain openers, cleanups, and insecticides). These would generally be packaged for consumer use and stored in small quantities. If used in the prescribed manner, they pose little threat. However, storage of large quantities of hazardous materials or extremely dangerous hazardous materials in individual units can pose a significant threat to public health. Such storage by private individuals is generally not regulated. This threat is minimized by LAHD standard operational controls that limit the amounts and type of hazardous materials that can be stored in its units. With these controls, the consequences would be "Moderate" and the probability "Possible." Under the above significance criteria, there is no significant impact from this project element.

Dry Stack Boat Storage and Maintenance Yard

This development includes a large storage building for the stacked storage of approximately 1,000 boats. The plan is to allow for boats to be stored without emptying their fuel tanks prior to storage. This poses a potentially significant threat of fire and explosion from this storage facility. However, LAFD requirements for fire prevention and protection will reduce the probability and severity of any fire or explosion in the structure. Fire prevention and protection requirements will reduce, but not eliminate, the possibility of a fire or explosion. The probability of an occurrence is "Possible." These safety requirements will also reduce the severity associated with any fire or explosion at the facility to the level of "Severe."

Under the above significance criteria, there is no significant impact from this project element.

The repair and service building would contain hazardous substances associated with maritime use (chlorinated solvents, petroleum products, paint stripers, paints, compressed oxygen, and compressed acetylene). The operation would be regulated by both Chapters 6.95 and 6.5 of the State Health and Safety Code. Compliance with these regulations will limit the occurrence to the "Occasional"

level and the severity of any hazardous materials release to "Slight." Under the above significance criteria, there is no significant impact from project element.

As discussed separately for each of these facilities above, the potential risks have been determined to be less than significant because the potential frequency and severity of consequences from the accidental release of hazardous materials does not fall in categories 1 or 2 on Table 3.14-1 (Frequent and Catastrophic, Periodic and Catastrophic, Occasional and Catastrophic, Frequent and Severe, or Frequent and Moderate).

Mitigation Measures
No mitigation is required.

Residual Impact
Impacts would be less than significant

Impact UPSET-3: Construction or Operation Activities Would Not Substantially Interfere with Emergency Response Plans or Emergency Evacuation Plans, Thereby Increasing Risk of Injury or Death

Construction and operation of the project would be subject to emergency response and evacuation systems implemented by the LAFD. During construction activities, the LAFD will require that adequate vehicular access be provided and maintained. The LAFD will review all plans prior to development to ensure that applicable access is maintained, and the project contractor will be required to ensure compliance with these measures. Therefore, no significant impact on emergency response plans or emergency evacuation plans would occur.

Mitigation Measures
No mitigation is required.

Residual Impact
Impacts would be less than significant.

Impact UPSET-4: The Project Would Not Increase the Frequency or Severity of an Accidental Release or Explosion of Hazardous Materials, Thereby Increasing Risk of Injury or Death

As discussed above, the proposed project would not increase the frequency or severity of an accidental release of hazardous materials. In fact, in many cases the potential frequency and consequences would be reduced as a result of upgrading aging and deteriorating facilities. New project components would be

developed in accordance with more stringent laws and regulations that will be adhered to during construction and operation. Appropriate oversight and review by responsible agencies will be provided in accordance with legal requirements. Therefore, no significant impacts would occur.

Mitigation Measures
No mitigation is required.

Residual Impact
Impacts would be less than significant.

Cumulative Impacts

Given the distance between the related projects and the project site, the project would not make a considerable contribution to a cumulative public health and safety impact.

3.14.3.4 Mitigation Monitoring Program Summary

No significant impacts would occur; therefore, no mitigation is required.