

5.0 APPLICATION SUMMARY REPORT

This narrative, including the EIS/EIR, constitutes an Application Summary Report and Proposed Staff Recommendations prepared in accordance with the certified PMP as amended and the CCA. Based on data contained herein, the proposed project is in conformance with the stated policies of the PMP. This document was circulated for public review and becomes effective upon certification by the BHC.

5.1 CONFORMANCE WITH THE PORT MASTER PLAN

As discussed in section 1.4.3, the natural gas pipeline, the portion of the C₂ pipeline located within the POLB, and the electric distribution facilities associated with the Long Beach LNG Import Project conform to the permitted utility uses within both the Terminal Island Planning District 4 and the Northwest Harbor Planning District 3. Therefore, these facilities are consistent with the PMP. The LNG terminal generally conforms to the overall goals of the current PMP and is consistent with the long-range planning goal for Terminal Island Planning District 4 to redevelop excess Navy property for development of Port facilities and the objective of pursuing development of primary Port and ancillary facilities on available lands within the district. An amendment to the PMP would be necessary, however, to accommodate the LNG facility because LNG is not an expressly identified “hazardous cargo” as permitted within Terminal Island Planning District 4.

5.2 CONFORMANCE WITH THE CALIFORNIA COASTAL ACT

To certify a PMP amendment, the CCC must find the amendment consistent with the policies of Chapter 3 and Chapter 8 of the CCA.

Consistency with Chapter 3 of the CCA

As described in section 1.4.2, Chapter 3 of the CCA lists the six coastal resources planning and management polices that are used to evaluate a proposed project’s consistency with the CCA. These six coastal resources planning and management polices and their relationship to the proposed project are discussed below.

Maximize Access to California’s Coast (Sections 30210 to 30214) – The proposed LNG terminal would be located in a previously developed, industrial area associated with the POLB. The closest onshore recreational facilities are located over 1 mile from the LNG terminal site. Construction and operation of the Long Beach LNG Import Project would not interfere with or change public access to coastal areas.

Protect Water-Oriented Recreational Activities (Sections 30220 to 30224) – Recreational boating and associated offshore recreational activities such as fishing are not allowed within the West Basin, which immediately surrounds the LNG terminal site. In general, fishing in the Los Angeles and Long Beach Harbors is discouraged because of heavy metal contamination of certain fish species. Minor delays to recreational boats could occur on days when an LNG ship arrives at the LNG terminal. SES estimates that LNG ships would arrive at the terminal up to 120 days per year. The Coast Guard, with the assistance of the POLB, would enforce the Title 33 CFR Part 165.1151 moving security zone of 1,000 yards ahead and 500 yards on each side and astern of the LNG ships. Other vessels, including recreational boats, would be prohibited within the security zone during the arrival of LNG ships. These effects would be temporary and minimized by the fact that the LNG ships would use established commercial shipping lanes that currently accommodate about 6,170 inward and outward vessel movements per year and the Coast Guard and the HSC currently require ships entering and leaving the POLB to maintain a minimum separation distance of 500 yards.

Maintain, Enhance, and Restore California's Marine Environment (Sections 30230 to 30237) – Potentially significant impacts on water quality associated with construction and operation of the LNG terminal would be reduced to less than significant levels through adherence to measures included in all applicable permits, implementation of the POLB's Dredge and Disposal Plan, and disposal of all sediments associated with dredging activities at approved sites. SES would also obtain a General NPDES Permit and WDR permit for Discharges of Hydrostatic Test Water to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties from the RWQCB and adhere to its terms and conditions. To minimize impacts associated with storm water runoff associated with the proposed LNG terminal, SES has prepared a draft site-specific SWPPP for the Long Beach LNG Import Project in accordance with the CSWRCB's NPDES General Permit for Storm Water Discharges Associated with Construction Activity. BMPs consisting of permanent features and operational practices designed or implemented to minimize the discharge of pollutants in storm water or non-storm water flows from the LNG terminal site would be adhered to by SES in accordance with its SWPPP once construction is completed and the facility is operational. As part of its SWPPP, SES has prepared a Spill Procedure to address preventive and mitigative measures that would be used to minimize the potential impact of a hazardous spill during construction and operation of the project facilities.

Activities associated with construction and operation of the LNG terminal including dredging, reinforcement of the shoreline structures, construction of the LNG ship berth and unloading facility, as well as noise and the accidental release of hazardous materials associated with these activities could impact marine organisms that occur in the project area. Overall, none of these impacts would substantially affect local resident or migratory marine organisms and, as such, are not considered significant. Adherence to the measures included in the ACOE's section 404 permit and the RWQCB's WDR permit would minimize turbidity-related impacts associated with dredging on marine organisms. In addition, implementation of SES' Spill Procedure would reduce impacts on marine organisms associated with a hazardous spill or leak to less than significant levels.

Protect Sensitive Habitats and Agricultural Uses (Sections 30240 to 30244) – There are no agricultural areas in the vicinity of the proposed LNG terminal site. The LNG terminal would be located in an existing industrialized area associated with the POLB. The proposed project area is designated EFH for the Coastal Pelagics and Pacific Groundfish Management Plans. Fourteen of the 86 species managed under these two plans are known to occur in the Los Angeles and Long Beach Harbors and could be affected by the proposed project. Although disturbance of an estimated 11.9 acres of sea floor and the temporary resuspension of sediments into the water column during dredging activities could potentially adversely affect EFH, adherence to the measures included in the ACOE's section 404 permit and the RWQCB's WDR permit and implementation of the BMPs in the POLB's Dredge and Disposal Plan, SES' SWPPP, and SES' Spill Procedure would serve to avoid or minimize impacts on EFH to less than significant levels.

Minimize Environmental and Aesthetic Impacts of New Development (Sections 30250 to 30255) – The proposed LNG terminal would be located in a previously developed, industrial area associated with the POLB. The existing infrastructure and public services of the POLB and surrounding areas would generally be able to accommodate the proposed facilities. However, because LNG would be a new product to the POLB, it would also be new to the local fire and emergency response services. SES is working with local emergency providers to develop procedures to handle potential fire emergencies and is working with the LBFD to provide hazard control and firefighting training that is specific to LNG and LNG vessels. The procedures would be included in an Emergency Response Plan for the facility. In addition, SES has committed to funding all necessary security/emergency management equipment and personnel costs that would be imposed on state and local agencies as a result of the project and would prepare a comprehensive plan that identifies the mechanisms for funding these costs. These measures should adequately equip the LBFD to handle any type of emergency at the proposed LNG terminal.

Construction and operation of the LNG terminal facilities would have a permanent impact on visual resources. The LNG storage tanks, in particular, would be tall in relation to the surrounding structures. Although there are a substantial number of potential mobile and stationary viewers and visibility is high in some locations (e.g., Queensway Bridge), the LNG facilities would be seen in the context of the existing industrial facilities at the POLB and would not adversely affect the viewshed from sensitive locations or change the character of the landscape in terms of either physical characteristics or land uses. In addition, the LNG facilities would not block or alter an important/valued view or have an adverse effect on a scenic vista. The overall visual impact associated with the LNG terminal facility was rated moderate to low and the existing POLB facilities would screen, backdrop, and otherwise minimize the overall visual impact of the LNG storage tanks to less than significant levels.

Locate Coastal-Dependent Industrial Facilities within Existing Sites Whenever Possible (Sections 30260 to 30265.5) – The LNG terminal associated with the Long Beach LNG Import Project is a coastal dependent industrial facility. Currently, the only feasible method of importing large volumes of LNG from overseas is by ship. The terminal would be located within an existing industrial area associated with the POLB. Specifically, the LNG terminal would be located on an existing portion of Pier T within Terminal Island Planning District 4 of the POLB.

Consistency with Chapter 8 of the CCA

Chapter 8 of the CCA recognizes the California ports, including the POLB, as primary economic and coastal resources and as essential elements of the national maritime industry [section 30701(a)]. Relevant sections of Chapter 8 of the CCA are listed below with a discussion of their relationship to the proposed project.

Section 30705

(a) – Dredging is allowed for berthing areas and facilities required for the safety and accommodation of vessels. Preparation of the ship berth for the LNG terminal facility would require the dredging of approximately 175,000 cubic yards of sediments to a depth of about -55 feet MLLW to accommodate safe under keel clearance and tidal fluctuation. This depth would safely accommodate the largest LNG ships expected to use the terminal.

(c) – Time dredging to minimize disruption to fish and birds, marine habitats, and water circulation. The dredging associated with the Long Beach LNG Import Project would be conducted within the West Basin where the tidal velocities are low and water circulation is currently somewhat restricted. The proposed dredging activities would not cause significant disruptions to water circulation. In addition, because the project would not involve the creation of new land, no permanent disruptions to water circulation would occur. Birds found in the area are acclimated to noise and/or temporary degradation of foraging habitats associated with dredging activities within the Port and would temporarily use similar habitats in adjacent areas. Due to the temporary nature of the disruption, the overall impact on birds would be less than significant. Adherence to the measures included in the ACOE's section 404 permit and the RWQCB's WDR permit and implementation of the BMPs in the POLB's Dredge and Disposal Plan would serve to avoid or minimize impacts on fish, including EFH, and marine habitats associated with dredging to less than significant levels.

The Navy and the POLB have conducted physical and chemical analysis of the sediments in the West Basin. In general, these studies found that the West Basin sediments consist of sand, fine silts, and clays. Metals, pesticides, PCBs, VOC, and semi-VOC were documented in sediments throughout the West Basin, but at generally higher concentrations under piers and near sea walls than in open water. The POLB currently plans to dispose of the dredged sediments at a confined disposal site previously approved

for contaminated materials within Long Beach Harbor (e.g., ITS Slip fill, East Basin Slip 1 fill, or upland site). The POLB could propose to dispose of uncontaminated dredged materials at an unconfined aquatic location (i.e., Western Anchorage Temporary Sediment Storage Site). In order to determine disposal site suitability, the POLB would prepare and implement a Sampling and Analysis Plan in accordance with the three-tiered testing protocols in the EPA/ACOE Inland Testing Manual. Based on the results of the tiered testing protocols, the ACOE would review and approve or deny the use of an unconfined aquatic location, or alternately approve the POLB's request to take the materials to a confined or upland site. Adherence to measures included in all applicable permit requirements, implementation of the POLB's Dredge and Disposal Plan, and disposal of all sediments at approved sites would reduce impacts on water quality associated with in-water work to less than significant levels.

Section 30707

(a) – *Minimize the risk of collision from movement of other vessels.* The Coast Guard, with the assistance of the POLB, would enforce the Title 33 CFR Part 165.1151 moving security zone of 1,000 yards ahead and 500 yards on each side and astern of the LNG ships. Enforcement of the moving safety zone would minimize the risk of collision from movement of other vessels. In addition, SES would participate with the Coast Guard in the development of procedures to reduce impacts on marine transportation, including implementation of an LNG Vessel Operation and Emergency Contingency Plan that would provide the basis for operation of LNG ships within the POLB. As a result, ship traffic associated with the Long Beach LNG Import Terminal would not cause significant vessel traffic congestion within the harbor and would not exceed the capacity for maritime commerce to operate efficiently and safely within the POLB.

Section 30708

(a) – *Minimize substantial adverse environmental impacts.* Potentially significant impacts associated with seismic hazards would be minimized by designing the project facilities to meet the POLB's seismic design criteria and exceed the seismic design criteria of NFPA 59A and other applicable codes. Potentially significant impacts on water and marine resources would be minimized through the implementation of SES' SWPPP (including Spill Procedure) and HDD Plan and the POLB's Dredge and Disposal Plan and adherence to measures included in the ACOE's section 404 permit and the RWQCB's WDR permit. All sediments would be disposed of at approved sites.

Emissions (criteria air pollutants) from construction and operation of the proposed project would result in significant unavoidable adverse air quality impacts because mitigation measures would be unable to reduce air emissions to less than the SCAQMD significance thresholds and the predicted impacts from operational emissions would potentially worsen an existing violation of the ambient air quality standards for PM₁₀ and PM_{2.5}. Construction impacts would, however, be temporary and intermittent and cease at the end of the construction phase.

The project is not expected to result in a substantial increase in the potential for incidents that would cause serious injury or death to members of the public. Furthermore, the implementation of federal, state, and local rules and regulations concerning security and the results of the WSA with its associated operations and Emergency Response Plan would minimize the risk to the POLB and the LNG operations. In addition, SES has committed to funding all necessary security/emergency management equipment and personnel costs that would be imposed on state and local agencies as a result of the project and would prepare a comprehensive plan that identifies the mechanisms for funding these costs.

(b) – *Minimize potential traffic conflicts between vessels.* The Coast Guard, with the assistance of the POLB, would enforce the Title 33 CFR Part 165.1151 moving security zone of 1,000 yards ahead and

500 yards on each side and astern of the LNG ships. The Coast Guard and the HSC already require ships moving within the precautionary area (i.e., the area extending 8 nm south of the Queens Gate entrance to the southern marine traffic separation scheme and 10 nm to the southwest to the western marine traffic separation scheme) and inside the breakwaters of the POLB to maintain a minimum separation distance of 500 yards. The additional 500 yards enforced ahead of an LNG ship should not cause any significant impacts on other commercial vessels within the POLB. In addition, as discussed above, SES would participate with the Coast Guard in the development of procedures to reduce impacts on marine transportation, including implementation of an LNG Vessel Operation and Emergency Contingency Plan that would provide the basis for operation of LNG ships within the POLB. As a result, ship traffic associated with the Long Beach LNG Import Terminal would not cause significant vessel traffic congestion within the harbor and would not exceed the capacity for maritime commerce to operate efficiently and safely within the POLB.

(c) – *Give highest priority to the use of existing land space within harbors for Port purposes.* No new land space would be created as a result of the proposed project. The facilities associated with the Long Beach LNG Import Project would take advantage of existing land space within the POLB for Port purposes (i.e., a shipping industry with related support and access facilities).

Section 30715

(a) – *Appealable developments.* The proposed project is appealable to the CCC.

5.3 CONFORMANCE WITH THE RISK MANAGEMENT PLAN

The RMP is a certified amendment to the PMP. The RMP provides a framework for siting hazardous facilities by identifying and defining hazards, vulnerable resources, and criteria for determining consistency with RMP policies. The approach for assessing the consequences of hazards specified in the RMP differs from that followed by the FERC. The RMP requires that the vulnerability of populations and facilities within the Port be assessed if they are in an area defined as hazardous; the FERC does not consider Port populations and facilities to be vulnerable.

The proposed LNG terminal is a hazardous facility as defined by the RMP. The hazards described in the RMP that are relevant to this project are radiant heat from a fire at the LNG terminal or on a vessel transporting LNG, and blast overpressure from the delayed ignition of a vapor cloud at the LNG terminal.

Four worst-case, radiant heat scenarios involving the release of LNG were deemed credible by Quest (i.e., having a frequency of greater than 1 in 1 million years) and analyzed for their hazard effects (see Appendix F). Three scenarios were characterized as accidental releases and one as an intentional release: rupture of process equipment (accidental); LNG ship collision (accidental); earthquake-induced failure (accidental); and terrorist-induced release (intentional). A number of specific events and outcomes were studied for each scenario. In addition, one vapor cloud scenario was deemed credible in connection with a rupture of process equipment.

The RMP requires that only the worst-case *probable* events be analyzed (Chapter II, C). Probabilities calculated for each event were used to determine which credible events are probable. Based on probability definitions developed by the LACFD and summarized on figure 4.11.10-1, events with a frequency equal to or less than 1 in 10,000 years are considered improbable, or “(n)ot expected or likely to occur at all.” Two radiant heat events (earthquake-induced failure and a terrorist-induced event) and the vapor cloud event have calculated probabilities less frequent than this threshold and were not assessed for consistency with the RMP.

It follows that events that occur more frequently than 1 in 10,000 years are considered probable. Two radiant heat events have calculated probabilities in the range of 1 in 100 years to 1 in 10,000 years and were assessed for consistency with the RMP:

- An accidental release at the LNG terminal stemming from a rupture of process equipment that results in a release of liquid product. Flow from the rupture lasts about 60 seconds until the product is exhausted. A total of 64,000 pounds of product is released. The escaping LNG ignites immediately and produces a torch fire.
- An accidental release from an LNG vessel due to the vessel colliding bow-first with the breakwater west of Queens Gate or due to the vessel colliding with another ship outside the breakwater. A release of product occurs initially from the cargo tank nearest the bow and, eventually, from the remaining cargo tanks. Within 20 minutes all five tanks have released their cargo. The released LNG pools on the water and ignites.

The sections below provide the criteria by which the consequences of these LNG releases can be assessed.

Hazard Footprints

The following criteria were used to delimit the areas (referred to in this section as hazard footprints) wherein impacts on vulnerable resources are identified:

- Not more than 1,600 Btu/ft²-hr for exposed personnel.
- Not more than 10,000 Btu/ft²-hr for structures.

The hazard footprint criterion for exposed personnel is consistent with the RMP (Chapter II, C.1.a), and is also contained in federal regulations (Title 49 CFR Part 193, which references NFPA 59A) as the basis for evaluating the risk associated with the outdoor assembly of people.

The hazard footprint criterion for structures is a value taken from NFPA 59A, and is used by the FERC as the maximum thermal heat flux value that cannot be exceeded outside the site property line. Note that this criterion is different from that contained in the RMP. The RMP, which was certified in 1981, allows for the use of updated standards per the following (Chapter II, C.2):

The risk management policies developed in this study are based on technologies and procedures in effect at this time. It must be realized that if the use of the new technology, including equipment, materials, procedures, regulations, and enforcement can render risk sufficiently improbable, then the existing criteria may become inapplicable and subject to revision.

Hazard footprints for the 1,600 Btu/ft²-hr and 10,000 Btu/ft²-hr values for the largest rupture of process equipment release event are shown on figures 4.11.10-3 and 4.11.10-6. Hazard footprints for the 1,600 Btu/ft²-hr and 10,000 Btu/ft²-hr values for the largest ship collision release events are shown on figures 4.11.10-2 and 4.11.10-5.

Vulnerable Resources

The RMP defines vulnerable resources as follows (Chapter II, B):

...residential, recreational, and visitor populations, and the Port working populations, critical regional facilities and high value facilities.

The RMP characterizes population vulnerable resources in terms of density. For Port working populations, high density is specifically referenced in policies for siting hazardous facilities (see RMP Siting Policies below). However, the RMP does not explicitly define high density. High density is assumed to be the highest density category contained in the legends for the RMP's population density maps, or more than 20 people per acre.

The RMP further characterizes critical and high value facilities as follows (Chapter II, B.2 and B.3):

[Critical facilities are] facilities in the Port that are important to the local or regional economy, national defense, or some major aspect of commerce.

[High value facilities are] facilities within and near the Port which have very high value. These include both facility improvements and cargo in place....

A survey of Port tenants was taken in May and June 2005 for purposes of analyzing Port working populations. The total numbers of employees, including ILWU labor, and the number of employees in a primary office building were collected from each tenant. Worker population densities were calculated for the primary building sites and for exposed workers (derived by subtracting workers in buildings from total workers). For purposes of deriving meaningful population densities for risk assessment purposes, calculations were performed only for tenants with 50 or more employees. This is consistent with NFPA 59A, which identifies the following as exclusionary areas within 1,600 Btu/ft²-hr footprints:

...outdoor assembly by groups of 50 or more persons....

RMP Siting Policies

The RMP provides the following as primary guidance in the siting of hazardous facilities (Chapter II, preamble):

*The overall policy to be followed by the Port ...will have as its objective the elimination of overlaps of hazard footprints and areas of residential, recreational, and visitor populations, and with **high-density working populations** [emphasis added].*

*This Plan contains policies to guide the future development of the Port in an effort to **eliminate** the danger of such accidents to residential, recreational, or visitor area populations, and to **minimize** the degree of hazard to the port working populations and property [emphasis added].*

A hazardous facility cannot be consistent with the RMP if its hazard footprint affects residential, recreational, visitor-serving, or high density working populations (i.e., more than 20 people per acre). Conversely, a hazardous facility can be consistent with the RMP if its hazard footprint affects working populations of 20 people or less per acre, critical facilities, or high value facilities as long as impacts are minimized.

Project Impact/RMP Consistency

The project's hazard footprints were combined with the Port's spatial information on vulnerable resources to produce the following consistency findings.

Rupture of Process Equipment Event

- No residential populations are within the 1,600 Btu/ft²-hr hazard footprint.
- No visitor-serving or recreation populations are within the 1,600 Btu/ft²-hr hazard footprint.
- Essentially no exposed Port workers are beyond the LNG terminal site within the 1,600 Btu/ft²-hr hazard footprint. Only a small crane maintenance building on Pier T falls within the hazard footprint, but workers inside this building would be shielded from the radiant heat. Pier T's main office building is located approximately 1,000 feet beyond the hazard footprint boundary.
- There are no critical or high-value facilities within the 10,000 Btu/ft²-hr hazard footprint. The nearest such facility is the Gerald Desmond Bridge, which is about 2,500 feet beyond the hazard footprint boundary.

The project is consistent with the RMP relative to the release of LNG due to a rupture of process equipment at the LNG terminal site.

Vessel Collision with the Breakwater or with Another Ship Outside the Breakwater Events

- No residential populations are within the 1,600 Btu/ft²-hr hazard footprint.
- No visitor-serving or recreation populations are within the 1,600 Btu/ft²-hr hazard footprint.
- There are no exposed Port workers within the 1,600 Btu/ft²-hr hazard footprint. The footprint exists entirely over the water and does not overlap terminal land. The nearest terminal with exposed Port workers is over 3,000 feet beyond the hazard footprint boundary.
- There are no critical or high-value facilities within the 10,000 Btu/ft²-hr hazard footprint. The nearest such facility is the SeaLaunch complex, including its two high-value vessels used to launch missiles, which is nearly 1.5 miles beyond the hazard footprint boundary.

The project is consistent with the RMP relative to the release of LNG due to a collision of an LNG vessel with the breakwater or with another ship outside the breakwater.