and the recommended mitigation measures within the Joint EIS/EIR. Finally, this infrastructure associated with the Shell/Sempra Energia Costa Azul facility, currently under construction, was not analyzed further in this document because a project-specific Draft Joint EIS/EIR, as described above, has been prepared. The North Baja Expansion Project is also discussed under Section 3.3.7.3, "Alternative California Onshore Locations" in the Final EIR.

In January 2005, Chevron of Mexico received a Mexican federal permit to construct its proposed Adentro de Baja California project that would be located 8 miles (13 km) off the coast of Tijuana. It would be a gravity-based structure that would be fixed in a depth of water of 65 feet (20 meters [m]). The terminal would be a fixed 980-foot (300 m) long concrete island with two regasification plants, storage tanks, a heliport, and a dock for LNG carriers. At this offshore terminal, the LNG would be regasified using seawater, and a new underwater pipeline would connect with Baja California's existing gas pipeline system. The terminal would have the capacity to produce an average of 700 MMcf (20 million m^3) per day with a peak capacity of 1,400 MMcf (40 million m^3) per day and would serve U.S. West Coast and Mexican markets. Engineering design has begun on this facility, but final investment decision about this facility has not been made.

In April 2005, Moss Maritime and its partner, Terminals y Almacenes Maritimos de Mexico (TAMMSA), received permits from the Mexican environmental agency to proceed with an offshore LNG terminal. However, other federal and local permits are still needed before they can begin operations in 2008. Moss Maritime/TAMMSA is proposing to install an FSRU approximately 5 miles (8 km) off the coast of Rosarito Beach in Baja California. The FSRU would have storage facilities, and a pipeline would connect the FSRU to shore. The production capacity would average 297 MMcf (8.4 million m^3) per day, and the FSRU would be a converted LNG carrier with a storage capacity of 4.4 MMcf (125,000 m^3).

The CEC estimates that demand for natural gas in Baja California will grow by 7.6 percent per year. If one or more of these proposed LNG terminals were brought on-line, the gas demand in Baja California, a region with 2.5 million people, would absorb some of the imported supplies.

Because a Baja terminal would be located onshore or in Mexico's territorial waters, the CSLC would not have jurisdiction to license facilities. Also, natural gas would not be transported from the outer continental shelf to the U.S., so MARAD would not have jurisdiction. Therefore, the U.S. would not have control over the design, approval, or monitoring of such facilities.

While potential impacts of a Baja California LNG offshore terminal would not occur in California, such a terminal would not necessarily result in fewer potential environmental effects than the proposed Project because many of the offshore effects would be equivalent to those that would occur in California waters. However, the onshore effects could be greater than those of the proposed Project because any onshore LNG terminal would have a large onshore footprint.

This alternative was eliminated because it would neither accomplish most of the purposes and objectives of the proposed Project to provide a secure supply of natural gas to either the Southern California or U.S. market nor result in reduced environmental effects relative to the potential effects identified for the proposed Project, but would merely transfer such impacts to another sovereign nation. In addition, the permitting, environmental review, and any ultimate approval of an LNG storage and regasification facility in Baja, would be outside the jurisdiction of the CSLC.

Specifically, the selection of an alternative project location in Mexico, should this be proposed, would be legally infeasible because no agency in the U.S. would have authority over any project in Mexico. Additionally, in May 2005, seven U.S. and Mexican environmental groups filed a challenge to Chevron of Mexico's Adentro De Baja California facility under the North American Free Trade Agreement. In light of all of these issues, it was determined that a Northern Baja site was not a reasonable alternative as defined under the CEQA and that further analysis was therefore inappropriate and unwarranted.

FINDINGS FOR REGIONAL OFFSHORE ALTERNATIVES

Description: Other offshore regions were evaluated as possible locations for offshore LNG facilities.

Finding(s): Several potential alternative sites for offshore terminals along the West Coast of the United States were eliminated from evaluation because they failed to satisfy most of a project's basic objectives, did not avoid or substantially lessen one or more of the Project's significant effects, or were not feasible.

Facts Supporting the Finding(s)

Other potential alternative locations for an offshore LNG terminal along the West Coast, without specifying exact locations within those regions, were identified by the Applicant and during scoping and the public comment period on the October 2004 Draft EIS/EIR.

Washington/Northern Oregon Region

Four onshore LNG terminals are currently proposed in the U.S. Pacific Northwest region, including the Port Westward LNG facility on the Columbia River about 7 miles (11.3 km) from Clatskanie, Oregon; the Warrenton LNG Project in Tansy Point, Oregon; the Northern Star LNG terminal in Bradwood, Oregon; and the Skipanon LNG facility in Warrenton, Oregon. There are no known proposals for offshore terminals at these locations.

An area near the mouth of the Columbia River, along the Washington-Oregon border, was considered for the location of an offshore terminal; however, it was eliminated because development of a terminal at this location would require a substantial upgrade of existing pipeline infrastructure, with the potential attendant environmental impacts, in

order to reach Southern California. Moreover, if LNG shipments were to originate in Australia, South America, or Southeast Asia, the shipping distance would be greater than that for a location in California and would add to the cost of the gas supply. This terminal location was eliminated from further evaluation as a reasonable alternative due to inadequate site suitability, safety (offshore wind and wave conditions), and other environmental concerns.

Southern Oregon/Northern California

Currently, the Jordan Cove Energy Project, an onshore LNG terminal proposed on the North Spit of Coos Bay, Oregon, is the only LNG project proposed for this region for which an application has been filed with the Federal Regulatory Energy Commission. The proposed facility would have an onshore receiving terminal which would have an average natural gas delivery capacity of 200 MMcf (5.7 million m^3) per day. FERC is currently reviewing the application. Excelerate Energy has stated its intent to develop the Pacific Gateway LNG facility offshore of Northern California; however, neither a license application has been filed nor the location identified. The projected baseload for this facility would be 0.6 billion cubic feet per day, with a peak load 1 billion cubic feet per day.

The Eureka area was examined as a potential location for an offshore LNG terminal because it is the only location in the Northern California/Southern Oregon region with access to PG&E's main gas transmission systems. However, costs of improving existing access to these gas transmission systems would be very expensive. This alternative would also be located far from Southern California and would require significant new pipeline construction, thereby incurring high pipeline tariffs and not reducing the potential impacts relative to those impacts identified for the proposed Project. Additionally, there could be safety issues because the wave and wind conditions outside the harbor can be severe.

In its 1978 Offshore LNG Terminal Study, the California Coastal Commission (CCC) eliminated areas between Point Conception and the Oregon border because of the areas' adverse weather conditions. This alternative was reconsidered to determine whether conditions had changed. However, wind, waves, and fog in those locations could make marine operations hazardous and less reliable. This alternative is not reasonable and was eliminated from further evaluation because of inadequate site suitability, safety (offshore wind and wave conditions), environmental concerns, and because it fails to meet most of the objectives of the proposed Project.

San Francisco Bay to Point Conception

Currently, no known LNG projects are planned or proposed in the area from the San Francisco Bay to Point Conception. Potential alternatives considered in Northern and Central California included sites within San Francisco Bay and Monterey Bay. Even though the CCC eliminated areas between Point Conception and the Oregon border in its 1978 Offshore LNG Terminal Study because of the adverse weather conditions,

locations in this region were reconsidered to ascertain whether conditions have subsequently changed.

An alternative location in and around the San Francisco Bay was eliminated from further evaluation because of the lack of suitable sites within the bay and because the waters outside the bay from Bodega Bay to Monterey are classified in one of three national marine sanctuaries – Cordell Bank, Gulf of Farallones, and Monterey Bay National Marine Sanctuaries. There are no available sites in remote areas within the Bay where a terminal could be located, and a previously proposed onshore terminal at Mare Island was dropped due to public concern regarding the safety of the facility in a densely populated area. Congested waterways and navigation areas may present a hazard for LNG carriers. In addition, the presence of LNG carriers could disrupt commercial and recreational vessels in this intensively used bay. Therefore, this potential alternative was eliminated because it is infeasible and increases, rather than avoids, potential significant environmental impacts.

Siting a terminal anywhere offshore of Monterey Bay would mean that the terminal and/or the offshore pipeline would have to cross through the Monterey Bay National Marine Sanctuary. Altering the seabed of the Sanctuary by placing a structure in it is prohibited in the Sanctuary.

The existing pipeline infrastructure in this region would also require significant upgrade or construction of a new large-diameter pipeline to deliver Project gas to the PG&E main gas transmission systems. In addition, a lack of protected areas for LNG carriers would limit operating periods because of the severity of winter storms.

The wind-wave conditions of the coast between Point Conception and Monterey Bay would significantly affect transfer operations between LNG carriers and a floating facility and would increase the potential risk of spills. Without significant hull strengthening, the increased swell dynamics in the area north of Point Conception would weaken a floating or fixed structure and would potentially compromise its structural integrity. This alternative also would be located far from Southern California and would require new pipeline construction, thereby incurring high pipeline tariffs and not reducing impacts relative to those effects identified for the proposed Project. Finally, this location was eliminated because of the wind-wave conditions that would not be favorable for an LNG facility and because it would conflict with the intended use of the marine sanctuaries. Sites north of Point Conception would not meet most of the objectives of the proposed Project, are prohibited within the Monterey Bay National Marine Sanctuary, and would require extensive onshore pipeline facilities; therefore, this location was not evaluated further.

Los Angeles to the Mexican Border

Locations for an offshore terminal were considered from Los Angeles to the Mexican border. A component of the CCC's screening guidelines for selection of potential offshore LNG terminals was the proximity to population centers. Areas offshore of Los Angeles and Long Beach were not considered because of the population density of the

nearby population centers and the existing and projected significant volume of vessel traffic in the area. San Diego Harbor is unsuitable for an LNG terminal because it would likely interfere with the operations of the U.S. Navy's Pacific Fleet, which is based in the harbor. Significant recreational boating in San Diego Harbor would also pose a difficult security and safety issue for the terminal and for LNG carriers. A number of chemical and conventional weapon disposal sites constrain suitable locations outside San Diego Harbor as well.

For the terminal facility and pipeline to avoid these sites, the terminal would have to be sited near the major north-south shipping lanes, which is incompatible with necessary safety buffers. As stated above, the CCC eliminated areas offshore of San Diego in its 1978 Offshore LNG Terminal Study. Therefore, because a reasonable site could not be identified, this location was eliminated from further consideration. However, Woodside Natural Gas Inc. submitted an application for a floating LNG terminal 22 miles (35 km) off the coast of Los Angeles.

FINDINGS FOR ALTERNATIVE CALIFORNIA ONSHORE AND OFFSHORE LOCATIONS

Description: Other California onshore and offshore locations for the LNG terminal were evaluated.

Finding(s): Potential alternative locations for onshore and offshore LNG terminals in California were eliminated from evaluation because they failed to satisfy most of the Project's basic objectives, did not avoid or substantially lessen one or more of a project's significant effects, or were not feasible.

Facts Supporting the Finding(s)

In 1978, under the mandate of the California LNG Terminal Siting Act, the CCC studied, based on sites nominated by the public and the CCC, 82 onshore and numerous offshore potential LNG terminal locations as a neutral, environmentally protective agency using specific siting criteria. These two studies represent the most comprehensive review of potential LNG terminal locations in California to date. The studies also included a public consultation process for both onshore and offshore studies, with more than 700 interested persons participating.

The LNG Terminal Siting Act specified an onshore siting criterion that the population density could be no more than 10 people per square mile (2.6 square kilometers [km^2]) within 1 mile (1.6 km) of the terminal and no more than 60 people per square mile (2.6 km^2) within 4 miles (6.4 km). Other considerations included wind, wave, and fog conditions, proximity to urban areas, earthquake faults, soil conditions, and rugged land. According to the CEC's 2003 Liquefied Natural Gas in California: History, Risks, and Siting, Staff White Paper, the siting criteria used by the CCC and CPUC in the 1970s are still applicable.

California Onshore Alternatives

The CCC concluded that any onshore LNG terminal would have serious effects on coastal resources and that all proposed sites would lead to major adverse effects on natural marine and wildlife resources, public recreation areas, and other resources protected by the California Coastal Act of 1976. The marine environment would be disturbed by construction activities, including trenching, blasting, and pile driving. Regular LNG tanker maneuvering, fuel oil deliveries, and tug and line boat activity would continuously bring noise and activity in areas used by seabirds and mammals, including the California gray whale. Because all of the onshore locations are relatively remote and undisturbed, an onshore LNG terminal would also alter the character of the area and disturb valuable wildlife populations.

The CCC found that four onshore sites met most of the siting criteria for an onshore LNG terminal location and were feasible when adverse wind and wave conditions, earthquake faults, soil conditions, and other factors were considered. These four sites, in the order ranked by the CCC, were Horno Canyon in Camp Pendleton (San Diego County), Rattlesnake Canyon (San Luis Obispo County), Little Cojo near Point Conception (Santa Barbara County), and Deer Canyon (Ventura County). After the ranking was completed, an earthquake fault was found near the Little Cojo site. Since there was a pending application for this location, it required further evaluation. Contingent upon demonstration of earthquake safety, the CPUC conditionally approved Point Conception (Little Cojo) because of its remote location; however, the proponents cancelled the project when they determined that the then price of natural gas made LNG uncompetitive.

The current owners of the land at the Point Conception location approved in 1978—the Bixby Ranch, the Hollister Ranch, and the Archer Trust—objected to the use of their land for industrial development and are considering putting a conservation easement on the property. Consequently, this site is not considered a viable alternative location for an onshore terminal due to seismic conditions and land use conflicts.

Aside from those sites evaluated by the CCC, the Final EIR also considered siting of the LNG terminal on one of the Channel Islands and concluded that it was not a feasible option due to potential land use conflicts. The islands north of the proposed facility location are under the jurisdiction of the National Park Service (NPS). Santa Barbara Island, which is located south of the proposed Cabrillo Port location, is also part of CINP. NPS provisions for the CINP are intended to conserve the sensitive marine organisms and other resources that occur in near shore waters of the CINP. Enforced restrictions include limits on marine vessel traffic and public use, special area closures, and designations for specific uses or activities. The presence of an LNG terminal would conflict with the intended purpose of the CINP and therefore is not a reasonable or feasible alternative.

San Nicolas Island, another Channel Island, is owned by the U.S. Navy. Part of its intended use is ordnance and missile testing; therefore, the presence of an LNG terminal would conflict this use and is not a reasonable or feasible alternative. No

onshore Channel Island location represents a feasible alternative; thus, siting an LNG facility onshore of one of the Channel Islands was eliminated from further consideration in this document.

Compared to the site proposed by the Applicant, onshore LNG terminals, although potentially feasible, would neither avoid nor lessen one or more of the potentially significant effects on the environment identified for the proposed Project. For example, marine traffic would increase, which is counter to the purpose of the Deepwater Port Act. In addition, under the Deepwater Port Act, MARAD may only consider a DWP beyond 3 nautical miles (NM) (3.45 miles or 5.56 km) from shore.

The FERC and the Port of Long Beach have published a Draft EIS/EIR (FERC Docket # CP04-58-000, et al., SCH# 2003091130) for an onshore LNG terminal at the Port of Long Beach, proposed by Sound Energy Solutions (SES). On January 22, 2007, the Long Beach Board of Harbor Commissioners disapproved the proposed project. However, due to the late timing and uncertainty of the proposed action, information on the Port of Long Beach project is provided in the Cabrillo Port Final EIR. The onshore LNG terminal could be authorized whether or not Cabrillo Port were licensed, and both projects could be licensed simultaneously. Hence, an onshore LNG terminal at the Port of Long Beach is an independent project, and, as such, may not represent a replacement of the proposed Project. Furthermore, it is difficult to compare the environmental impacts of the SES LNG terminal and the proposed Project because each analysis is based on different project-specific significance criteria by which impacts were evaluated and the nature and extent of the risk analyses for the Cabrillo Port and the Port of Long Beach differ. Last, as indicated above, the SES LNG terminal has been disapproved by the Long Beach Board of Harbor Commissioners, which renders the project too speculative to be feasible.

California Offshore Alternatives

In 1978, the CCC conducted an offshore terminal study that was similar to the one conducted for onshore LNG terminal siting. The CCC study evaluated potential locations based on the following factors: (1) ownership, use, and character of the area around each site zone; (2) site availability; (3) recreational resources; (4) marine and terrestrial biology; (5) geologic and engineering considerations affecting terminal feasibility; (6) choice of design types; (7) pipeline routing feasibility and impacts; (8) maritime conditions; and (9) construction costs. Site selection criteria included the need for the site to be in water depths less than 750 feet (229 m) due to subsea pipeline installation constraints; have a gently sloping bottom topography; and have a hospitable wind, wave, and swell environment. The depth limitation is no longer applicable because advances in technology enable pipelines to be laid in much deeper waters.

Areas offshore of Central and Northern California between Point Conception and the Oregon border were eliminated from further consideration because of adverse weather conditions and the presence of military operations, ship traffic, and marine and coastal resources. No population density criteria were applied to the siting of an offshore facility; however, locations within 4 miles (6.4 km) of a permanent population of 1,800

persons were eliminated. Thus, offshore areas within 4 miles (6.4 km) of Los Angeles, Long Beach, and San Diego were eliminated.

The study evaluated seven zones and then 16 sites between Point Conception and the Mexican border. Eventually, seven sites were selected as potential terminal locations: Ventura Flats, offshore of Deer Canyon, offshore of Camp Pendleton, offshore of Chinese Harbor, offshore of Smuggler's Cove, offshore of San Pedro Point, and Bechers Bay. Ventura Flats was selected as the optimal location.

Nine offshore sites were evaluated as potential alternatives to the proposed Project: the seven sites identified in the 1978 CCC Offshore LNG Terminal Study and two sites identified during public scoping—Anacapa and the west side of the Channel Islands.

The following analysis uses the 1978 criteria and updates the information as appropriate. All of the sites, except Ventura Flats, were eliminated from further consideration for the reasons detailed below. The Ventura Flats location is part of the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative.

Gaviota Pass

Gaviota Pass, near the coastline approximately 15 miles (24 km) east of Point Conception, was considered as an alternative offshore location. Gaviota Pass is very close to two onshore sites, Little Cojo and Las Varas, which were evaluated in the CCC's 1978 Final Report Evaluating and Ranking LNG Terminal Sites. The Las Varas site was rejected because of the presence of a seismic fault, and a similar fault was found at Little Cojo. The CCC did not consider offshore locations in the Santa Barbara County area because "any offshore LNG terminal near the mainland in western Santa Barbara Channel would conflict with the valuable marine and recreational resources present there." Gaviota Pass was not retained for evaluation as an alternative offshore location because of the potential seismic activity in the area and the potential conflicts with marine and recreational resources present in that part of the Santa Barbara Channel.

Offshore of Camp Pendleton

The 1978 CCC offshore report identified a site offshore of Camp Pendleton, approximately 1.5 to 3 miles (2.4 to 4.8 km) offshore of a long stretch of San Diego County coastline. The CCC concluded that either a floating or fixed facility would be feasible because the location met the geotechnical, population density, and marine resources criteria. However, the CCC recognized that there were potential seismic problems, recreational conflicts, safety issues, and aesthetic concerns. Currently, as described below, despite the advances in technology, the potential negative aspects of the site have increased since the 1978 CCC report.

For example, the site offshore of Camp Pendleton would be highly visible to a large number of people traveling on Interstate 5. Its presence would also degrade the recreational experience of beach visitors at San Onofre State Park and would restrict access for local boaters and sport fishers because there would be an exclusion zone

around the facility and any approaching LNG tanker. Additionally, the population of the areas surrounding Camp Pendleton has increased since the original recommendation in 1978: San Clemente has grown by almost 23,000 people since 1980 and Oceanside has grown by almost 33,000 people since 1990. In addition, there is a fault 4 miles (6.4 km) offshore.

The U.S. Marine Corps also uses the waters off Camp Pendleton for amphibious warfare-training exercise. In June 2004, the Navy's Advanced Amphibious Assault Vessel (AAAV) ocean training area was extended seaward from 3 NM (3.5 miles or 5.6 km) up to approximately 25 NM (29 miles or 46 km) from Camp Pendleton beaches to conduct AAAV over-the-horizon training exercises. This use of the ocean offshore of Camp Pendleton by the Department of Defense could be precluded by the safety zone that would surround the LNG terminal and might also be affected when LNG carriers transit to and from the facility. Therefore, an LNG terminal anywhere within the AAAV ocean training area could disrupt naval exercises, training, and traffic.

Further, due to the proposed distance offshore, LNG carriers would have to cross the shipping lanes to reach the LNG terminal; therefore, commercial vessel traffic could be disrupted. Recreational vessel traffic would need to avoid the safety zone. Since the location would be relatively close to shore, it is assumed that the volume of the recreational vessel traffic would be significant; therefore, impacts on recreational vessel traffic would be adverse.

This alternative was eliminated from further analysis because of its inability to avoid potential significant environmental impacts, specifically because it is close to shore. In addition, this alternative would involve potentially significant impacts on recreation, visual resources, public health and safety, as well as potential land use conflicts. There would be potentially significant impacts on the Navy's ability to train at Camp Pendleton if an LNG terminal were located within its AAAV ocean training area. Finally, the proposed facility would not have been subject to the provisions of the Deepwater Port Act.

Offshore of Deer Canyon

Although a floating terminal approximately 1 mile (1.6 km) offshore of Deer Canyon would be technically feasible, some of the factors that were considered favorable in the 1978 CCC offshore study are no longer favorable. For example, the Santa Monica Mountains were not designated as a national recreation area until later in 1978. Moreover, even at the time the study was published, the CCC recognized that there would be significant visual effects on nearby recreation areas, including Leo Carrillo and Point Mugu State Parks and the Santa Monica Mountains.

Given that this location would only be 1 mile (1.6 km) offshore, the facility would be visible from State Route 1 and would pose a potential threat to public safety if an accident were to occur. LNG carriers would also have to cross the vessel traffic separation scheme and therefore disrupt coastal recreational and commercial vessel traffic. In addition, the CCC report cited potential conflicts with the Pacific Missile

Range Test Center activities and a State oil lease. Currently, there are no known conflicts with the Pacific Missile Range or with a State lease; however, this alternative would have significant aesthetic and recreation impacts.

This potential alternative was eliminated from further consideration because it would result in potentially significant effects on aesthetics, public safety, marine traffic, and recreation. Potential sites further than 1 mile (1.6 km) offshore of Deer Canyon but landward of the vessel traffic separation scheme would have similar adverse effects. Moving further from shore would decrease the aesthetic, marine traffic, and recreational impacts but would increase the potential interference with commercial vessel traffic.

Offshore of Chinese Harbor, Smugglers Cove, San Pedro Point, and Bechers Bay

The Chinese Harbor, Smugglers Cove, and San Pedro Point locations are offshore of Santa Cruz Island, and the Bechers Bay location is offshore of Santa Rosa Island. All of these sites are considered unacceptable because of their location within the Channel Islands National Park (CINP) and National Marine Sanctuary, established in 1980, and the biological significance of the surrounding resources. NPS provisions for CINP are intended to conserve the sensitive marine organisms and other resources that occur in nearshore waters of the CINP. Enforced restrictions include limits on marine vessel traffic and public use, special area closures, and designations for specific uses or activities. Approval of an LNG facility in these locations is highly unlikely because it would conflict with the national park's or sanctuary's intended land use. Therefore, these potential alternatives were eliminated from further consideration.

Anacapa

The Anacapa alternative location was proposed by the Applicant and is approximately 14 NM (16 miles or 26 km) offshore of Point Mugu and approximately 9.5 NM (11 miles or 17.6 km) from Anacapa Island, which is part of the CINMS. Like the other locations located within the CINMS, approval of an LNG facility is unlikely because it would conflict with the sanctuary's intended land use. Therefore, this potential alternative was eliminated from further consideration because it is not feasible.

West Side of the Channel Islands

During the public scoping period, a commenter suggested the west side of the Channel Islands as an alternative location for the DWP. This alternative was considered but not retained for full analysis because it is infeasible primarily because it would be located within the CINMS. In addition, water depths on the west side of the Channel Islands are greater than those of the proposed Project mooring location, slopes are steep (which would make it difficult to delineate a submarine pipeline route from this location to the shore), and wind/wave conditions can be severe. Also, depending on the location, operations of an FSRU on the west of the Channel Islands, where the Navy conducts exercises, could interfere with Naval activities. This area is also along whale migration routes. Therefore, this potential alternative was eliminated from further consideration because it is not feasible.

FINDINGS FOR ALTERNATIVE DEEPWATER PORT CONCEPTS

Description: Alternative deepwater port concepts include different types of fixed and floating LNG regasification facilities that have either been proposed in concept or evaluated in other locations. There were considered as alternatives to the proposed concept.

Finding(s): Alternative deepwater concepts were determined either not to be feasible at the location proposed for the deepwater port, would have potentially greater environmental impacts, or would not fulfill the project's objectives.

Deepwater port concept alternatives fall into two categories: fixed or floating facilities. The following sections evaluate different deepwater concepts for fixed and floating facilities. Two possible platform-based LNG terminal alternatives are the use of an existing oil platform or construction of a new platform. Another fixed alternative is a gravity-based structure. Alternatives for floating facilities are single and multi-point mooring systems. Descriptions of these alternatives and the reasons for their elimination from further analysis of potential environmental impacts are provided below.

Fixed Offshore Liquefied Natural Gas Terminal

Existing Platform-Based Terminal Alternative

Currently, there are 27 oil and gas production platforms operating in Federal or State waters in the Santa Barbara Channel, Santa Maria Basin, and offshore of Los Angeles/Long Beach. Most are more than 20 years old. Offshore oil platforms can be used only for the intended use for which they were permitted. Altering or converting the function of an offshore oil platform for either exclusive use as an offshore LNG terminal or dual use as an offshore LNG terminal and oil and gas production facility requires a new Development and Production Plan for that platform, approved by the U.S. Department of the Interior, Minerals Management Service.

These platforms were not built either to berth LNG carriers or to support ancillary equipment. A comprehensive structural analysis would be needed to determine if a platform is sufficiently structurally sound to extend its lifespan and to support a DWP for LNG. Adding berthing capability to an existing platform would create a larger object in the viewshed and would extend the life of an existing offshore visual effect that is currently scheduled for removal at the conclusion of all oil and gas operations.

An LNG terminal at an offshore oil platform may not have the capacity to provide a continuous and reliable supply of natural gas at reasonable rates, which is one of the purposes of the Cabrillo Port DWP. The existing platform-based terminal was eliminated as an alternative to the proposed Project because it would not provide sufficient storage capacity "to enable a continuous, reliable supply to local energy markets." Also, due to its lack of storage at the terminal, the regasification process, which is generally slower than carrier unloading, could not proceed independently of unloading, and the delivery vessel(s) would need to remain moored longer at the

terminal. In addition, sufficient information is not available to analyze the potential environmental impacts to a level sufficient to determine whether a platform-based LNG terminal alternative "...would avoid or substantially lessen any of the significant effects" of the proposed Project (State CEQA Guidelines § 15126.6).

New Fixed Platform-Based Terminal Alternative

A platform-based terminal could be designed to receive and regasify LNG and send the natural gas to shore via a pipeline; however, it would be technically infeasible to consider placing a platform at the same location as that of the proposed Project because, to date, fixed platforms have not been installed at the ocean depth of the proposed DWP location (approximately 2,900 feet [884 m]). To date, fixed platforms have been installed to water depths of 1,353 feet (412 m). Compliant (flexible) pile and compliant or guyed platforms have been installed in water depths to 1,753 feet (534 m). Only floating facilities have been installed to greater depths.

A new platform would have not only visual effects for those who live in and use the viewshed, but also greater potential environmental effects than conversion of an existing platform, since the impacts associated with installation of existing platforms have already occurred.

A fixed platform-based LNG terminal may also have to be constructed closer to shore than the proposed Project location due to considerations of water depths in the area. If one were installed closer to shore within feasible water depths, the platform could create an additional navigational hazard in the Santa Barbara Channel, and the necessary safety zone would affect maritime commercial and recreational activities because it would be in a high vessel-traffic area. Given that a new platform would be fixed to the seafloor, the potential adverse effects of local seismic activity to the structure would be greater than the effects to a floating facility.

The new platform-based terminal alternative was eliminated as an alternative to the proposed Project because unless storage capacity is provided it would not provide a continuous and reliable supply of natural gas to local energy markets, and the potential environmental and safety effects could be greater than those of the proposed Project. In addition, sufficient information is not available to fully analyze the potential environmental impacts to a level sufficient to determine whether this LNG facility configuration "would avoid or substantially lessen any of the significant effects" of the proposed Project (State CEQA Guidelines § 15126.6).

Gravity-Based Structure

A gravity-based structure is one that remains secured to the seafloor, primarily by gravity. A gravity-based structure can be constructed onshore (usually from concrete), floated to a site, and installed to provide an offshore enclosure and foundation for LNG tanks and a stable deck for regasification equipment. Factors influencing this concept include constructability, weather, safety, shipping, environmental setting, geology of the seabed (including water depth), and regulatory permitting.

Gravity-based structures are not suited to the water depth at the proposed DWP (approximately 2,900 feet [884 m]), and therefore would have to be located closer to shore. The deepest concrete deep water structure is the Troll A platform in the North Sea, which is installed in 1,148 feet (350 m) of water. It is not an LNG facility. In general, gravity-based structures are more economical in waters deeper than 100 feet (30.5 m).

This potential alternative terminal technology was eliminated from further consideration because of the technical infeasibility of installing it at the location of the proposed Project or any other location with similar attributes, e.g., distance from shore, and because a location closer to shore would pose greater visual effects and potential marine traffic issues than the proposed Project.

Floating Offshore Liquefied Natural Gas Terminal

Single-Point Mooring Direct Regasification

The single-point mooring direct regasification concept was considered, but eliminated as an alternative because it does not serve the purpose and need of the proposed Project.

The basis of this system is a single submerged turret loading buoy moored to the seabed that remains submerged 82 to 131 feet (25 to 40 m) below the water surface. When an LNG carrier with the proper fittings approaches the buoy location, the LNG carrier retrieves the buoy into a mating cone in the bottom of the vessel. Currently, these systems operate in 279 to 1,148 feet (85 to 350 m) water depth with significant wave heights of 53.8 feet (16.4 m), but ocean basin tests have verified these systems could operate in water depths ranging from 131 to 2,958 feet (40 to 900 m). Operational oil submerged turret systems have eight to 12 mooring legs and are anchored by piles, suction, or drag anchors. Cabrillo Port would be moored with nine drag anchors; therefore, the seabed footprint of a single-point mooring system could be slightly smaller or larger than that of Cabrillo Port.

With a submerged turret loading technology, specially designed LNG carriers with onboard regasification equipment are required. After mooring, the LNG carrier would regasify the LNG onboard and send the natural gas through the mooring point via a flexible riser to a subsea pipeline. Regasification of the entire LNG cargo of approximately 3 billion cubic feet (85 million m^3) of natural gas would take six to seven days.

One example of this DWP concept would use a flow-through, single-point mooring such as that installed for the Excelerate's Gulf Gateway Energy Bridge™ DWP (formerly El Paso Energy Bridge Gulf of Mexico), a system specifically designed for intermittent service. For this DWP, a "shell and tube" regasification technology was used, in which multiple smaller-diameter tubes are housed in a larger tube that acts as a shell. LNG is transported through the smaller tubes and water flows through the larger tube, allowing heat transfer between the two fluids separated by the tube wall.

For the shell and tube technology, either a once-through heating water (open loop) vaporization technology or a steam-heated (closed loop) system is used. Excelerate's Gulf Gateway Energy Bridge™ can operate using either technology. The negative environmental consequences of the open loop system include substantial seawater intake and discharge. An open loop system would require a daily intake of 76.1 million gallons (288,000 m^3) per day of seawater to provide a supply of 500 MMcf (14.2 million m^3) per day. Seawater that has passed through the open loop shell-and- tube system would be discharged at a temperature 13.5°F (10.3°C) lower than the temperature at which it entered the system. The intake of seawater could cause the impingement and entrainment of fish eggs or larvae. The discharge of relatively cooler water could have an adverse effect on marine biota in the immediate vicinity of the discharge.

In contrast, in the closed loop system the propulsion boilers would heat water that would circulate through the shell-and-tube vaporizer to heat the LNG. After heating the LNG in the shell-and-tube vaporizer, the water would circulate through the steam heater to rewarm the water and then recirculate through the shell-and-tube vaporizer. The closed loop system does not use seawater and therefore does not have the impacts on water quality or marine biological resources that an open loop system has. However, because the closed loop system on Excelerate's Gulf Gateway Energy Bridge™ project has to use two boilers and a diesel generator for the regasification of LNG, in contrast to the one boiler needed to operate during the open loop system, additional air emissions are generated. Air emissions at Gulf Gateway Energy Bridge™ would be higher than at Cabrillo Port. Excelerate's Northeast Gateway Energy Bridge™ proposed project in Boston (a dual-point mooring system discussed below under "Multiple-Point Mooring Direct Regasification") would have lower emissions because the U.S. Environmental Protection Agency (USEPA) required different emissions controls. Each would operate in different USEPA regions and under facility-specific operating permits.

An objective of the proposed Project is to develop a DWP that would provide sufficient natural gas storage capacity to enable a continuous, reliable supply to local energy markets. The single-point mooring system alternative cannot fulfill this objective. In general, a single-point mooring concept is designed only to meet intermittent market demand; it only can provide natural gas when an LNG carrier with regasification technology is berthed. According to the environmental assessment of the license application for Excelerate's Gulf Gateway Energy Bridge™ DWP, a single LNG carrier can transport a maximum of 36.4 million gallons (138,000 m^3) of LNG and has a goal of six to seven days to unload and regasify. If weather prevents an LNG regasification carrier from berthing, no natural gas could be supplied. The Excelerate system is designed and tested to withstand weather events in the North Sea; however, its operations are governed by a USCG approved operations manual. This type of system also does not provide storage for LNG or natural gas. The proposed Cabrillo Port FSRU has a storage capacity of 72 million gallons (273,500 m^3) and can discharge under anticipated weather events.

The relatively large number of traditional LNG carriers that could call at the FSRU (220 with an additional 137 on order) would add to the Project's reliability, in contrast to the

few specifically designed LNG carriers (three are currently operational, two are on order) equipped to regasify on board.

The single-point mooring DWP concept cannot meet the objective of a continuous supply of natural gas; therefore, this type of project would not be a feasible alternative to the proposed Project.

Multiple-Point Mooring Direct Regasification

The multiple-point mooring system would be the same as the single-point mooring system except that a multiple-point mooring system would have multiple separate buoys. The purpose of this system would be to provide continuous service at the same capacity as the FSRU. In order to have comparable capacity as the FSRU, a two-buoy system would be needed, based on the current size of LNG regasification carriers of 36.4 million gallons (138,000 m^3). The next generation of LNG regasification carriers is projected to carry 39.9 million gallons (151,000 m^3).

An example of a multiple-point mooring DWP design is the Northeast Gateway Energy Bridge™ Port, for which the USCG, MARAD and the Massachusetts Executive Office of Environmental Affairs (MEOEA) have published a Final EIS/EIR in 2006. This design consists of two sets of natural gas receiving and regasifying facilities. Each facility consists of the following fixed components: a subsea Submerged Turret Loading™ buoy, a flexible riser, eight suction pile anchors, a pipeline end manifold (PLEM), and a subsea flowline that would facilitate the mooring and connection of a fleet of purpose-built Energy Bridge™ Regasification Vessels (EBRVs) that call at the Northeast Gateway Port. EBRVs are standard LNG tankers that have been specially built to contain equipment for LNG regasification and delivery of natural gas. This subsea system would be similar to the system proposed for Cabrillo Port; however, the subsea footprint would be two times the size and therefore potentially greater impacts on the subsea environment.

The Northeast Gateway Energy Bridge™ Port design allows for current and future capacity EBRVs, from 36.5 to 66.0 million gallons (138,000 to 250,000 m^3). An EPRV would dock at the Northeast Gateway Energy Bridge™ Port at one of the two Submerged Turret Loading™ buoys which that serve as the anchor system for the EBRV, allowing it to weathervane (swivel or rotate) about the axis of the buoy while moored in response to wind, waves, and currents. Regasification would occur via closed-loop shell and tube recirculating heat exchangers heated by steam from boil-off gas/vaporized LNG-fired boilers. The Northeast Gateway Energy Bridge™ Port, if licensed, would use only a freshwater-based closed-loop mode. Regasification of LNG from an EBRV is expected to take eight days. To reach the 800 MMcf (22.7 million m^3) per day baseload proposed, the Northeast Gateway Energy Bridge™ Port would need to continuously operate at least one EBRV, thus necessitating the arrival of an EBRV approximately every seven to eight days. There would be an estimated 10 percent overlap in EBRVs at the Northeast Gateway Energy Bridge™ Port; as one EBRV is completing regasification, another would be mooring at the second buoy and starting regasification.

For Cabrillo Port, the FSRU would always be present and one to two LNG carriers would dock weekly. LNG unloading would require 16 to 21 hours, depending on the size of the carrier, and then the LNG carrier would leave. Regasification would use submerged combustion vaporizers and engine cooling would be accomplished through a closed loop tempered water system. Docking of an LNG carrier at the FSRU would require the assistance of tugboats. A vessel would patrol the area around the FSRU at all times.

A 0.27 NM (0.3 mile or 0.5 km) radius safety zone would likely be required for each mooring turret in a multiple-point mooring system and the Cabrillo Port FSRU. Once established, safety zones are enforceable, such that unauthorized vessels would not be allowed to enter. A mandatory no anchoring area would be established around each buoy to protect the port's mooring components and any vessel engaged in underwater activities (trawling, research) that could become entangled in the mooring gear. An ATBA would probably be established around each turret of a multiple-point mooring system or around the entire mooring system.

The Applicant has requested an ATBA be established around Cabrillo Port. Vessels could enter the ATBA, but the recommended maximum speed would be 10 knots (11.5 mph or 18.5 kph). The size of the ATBA would be determined at the time of licensing, but an ATBA for a DWP could range from a radius of 0.54 to 1.6 NM (0.6 to 1.8 miles or 1 to 3 km). Excelerate's Gulf Gateway Energy Bridge™ project has a 0.27 NM (0.3 mile or 0.5 km) safety zone, a 0.8 NM (0.9 mile or 1.5 km) no-anchoring zone, and a 1.1 NM (1.3 miles or 2 km) ATBA. Excelerate's Northeast Gateway Energy Bridge™ would have a 0.27 NM (0.3 mile or 0.5 km) safety zone around each buoy regardless of whether an LNG carrier were docked. The ATBA would have a radius of 1.4 NM (1.6 miles or 2.6 km). The no anchoring area would have a radius of 0.6 NM (0.7 miles or 1.0 km) around each buoy. Cabrillo Port would have only one safety zone/ATBA; therefore, it would likely have a smaller total area set aside for safety zones than a dual-point mooring system. Therefore, the dual-point mooring system could have greater impacts on recreational and commercial vessels in the area and potentially greater impacts on marine traffic.

Although the dual-point mooring system would have the capability of providing a continuous supply of natural gas, it could have the same type of environmental issues as the single-point mooring regasification system. That is, if the open loop system were used, it could adversely impact fish eggs, larvae, and other marine biota due to the discharge of relatively cooler water. If the closed loop system were used, impacts on marine biota would be minimized. For an eight-day period each year, some seawater intake would be required for main condenser cooling and other cooling systems, ballast water, and maintenance of emergency water deluge and fire-main system. An average of 4.97 million gallons per day of seawater would be required at the Northeast Gateway Energy Bridge™ Port during this eight-day-per-year period, for a total intake of 39.78 million gallons per year.

The total discharge during each eight-day period would be 3.08 million gallons per day. Of this, approximately 2.0 million gallons per day would be used in the heat recovery

and exchange mode. The remaining seawater intake volume would be used for ballasting and all other ship operations. Marine fishery loss due to entrainment was estimated at approximately 48,774 age-1 equivalents (equivalent to approximately 2,330 pounds). Based on equivalent yield (in pounds), lobster, pollock, and yellowtail flounder make up the majority of the predicted annual loss. This is slightly more than the 4.17 million gallons per day (based upon a weighted average of normal and peak seawater intake) proposed by Cabrillo Port. Although the marine life impact from the Northeast Gateway Energy Bridge™ Port and Cabrillo Port project cannot be directly compared, it can be assumed that the impacts would be generally equivalent.

Depending on whether an open loop or closed loop regasification system were used, either impacts on marine biota or air emissions could be greater than Cabrillo Port's impacts; the seabed footprint would be approximately two times that of Cabrillo Port; and the area with access restrictions and/or recommended speed limits would be twice Cabrillo Port's area. In addition, since the existing projects using this type of technology have very different impacts, it would be speculative to evaluate the exact configuration of this type of LNG facility offshore of California. Therefore, a dual-point mooring was eliminated from further consideration because it would be speculative to estimate the full spectrum of environmental impacts of such a project offshore of California.

Woodside Natural Gas, Inc. submitted an application for a floating LNG terminal (The OceanWay project) that proposes to install a two-buoy delivery system 22 miles (35 km) off the coast of Los Angeles. However, the nature and extent of impacts associated with the Woodside Natural Gas Project cannot be predicted with any certainty at this time because the necessary environmental analyses have not yet begun. Further, due to the uncertainty of the length of time required to complete the environmental analyses for projects for which the application process has either just begun or for which no application yet exists, and the limited information available, the CSLC does not regard such project as a reasonable alternative to the proposed Project.

1.5.2 FINDINGS ON POTENTIAL ALTERNATIVES ANALYZED IN THE FINALEIR

The following findings describe the potential alternatives that were determined to be reasonable alternatives meriting detailed study in the EIS/EIR, and the basis for the CSLC rejecting these alternatives.

FINDING FOR SANTA BARBARA CHANNEL/MANDALAY/GONZALES ROAD DEEPWATER PORT ALTERNATIVE

Description: The proposed mooring point location is approximately 7.4 NM (8.5 miles or 13.7 km) offshore of Rincon Beach and approximately midway between two existing oil production platforms in the Santa Barbara Channel, Platforms Grace and Habitat. The alternative mooring location would be approximately at latitude 34°14.410'N, longitude 119°30.916'W and would meet safety criteria because it would be more than 2.6 NM (3 miles or 4.8 km) from shipping lanes and existing facilities. It would be approximately 5.8 NM (6.7 miles

or 10.7 km) landward from the coastal shipping lanes and more than 4.32 NM (5 miles or 8 km) from the nearest offshore production platform.

Pipeline routes connecting an FSRU at this location to the existing SoCalGas facilities at Ormond Beach would be difficult to locate since they would have to either cross or go around Hueneme Canyon. Given the depth and geologic instability in the vicinity of this canyon, the only viable route is south of the canyon. This route would require the pipeline to be located in or near coastal shipping lanes. Therefore, these routes connecting to Ormond Beach were not considered.

The most viable pipeline alternative for the Santa Barbara Channel mooring location would be to route the pipeline from the mooring location to the Reliant Energy Mandalay Generating Station shore crossing, north of Port Hueneme, where natural gas facilities already exist. These facilities would require upgrades to accommodate the transfer of the volume of gas being transported onshore. The Mandalay Generating Station is located near Oxnard Shores in Oxnard, and the pipeline would traverse parts of Oxnard. The Reliant Energy Mandalay Generating Station shore crossing is located between McGrath State Beach and Mandalay Beach Park.

The offshore pipeline would start at the mooring point in water approximately 265 feet (80.8 m) deep and travel southeast approximately 5.92 NM (6.8 miles or 11 km) southeast to Platform Gilda. The natural gas pipeline would then continue easterly approximately 8.5 NM (9.8 miles or 15.8 km) to the shoreline. This route would generally follow an existing utility ROW before it diverges in State waters and heads to the Mandalay Generating Station.

Similar to the proposed Project, it is assumed that the alternative shoreline crossing would be accomplished with HDB. The HDB exit points would be in a water depth of 43 feet (13 m), approximately 1.0 NM (1.2 miles or 1.9 km) from the shoreline. The HDB entrance point would be at an unspecified location at the Reliant Energy Mandalay Generating Station shore crossing. The length of the bore would be approximately 1.25 NM (1.4 miles or 2.3 km).

From the Reliant Energy Mandalay Generating Station shore crossing, the pipeline would be installed primarily in existing road ROWs. The pipeline would travel north along Harbor Boulevard and turn east at West Gonzales Road. The pipeline would follow West Gonzales Road to East Gonzales Road until Rose Road, where it would meet Center Road Pipeline Alternative 1 at milepost

(MP) 8.0 and would follow that route to the Center Road Valve Station.

Like the proposed Project, a pipeline would have to be constructed in Santa Clarita along the Line 225 Pipeline Loop. The route through Santa Clarita for this alternative would be the same as the proposed Line 225 Pipeline Loop route.

Finding(s): This alternative could meet short- and mid-term natural gas demand. The proposed mooring point location is approximately the same as that of the Ventura Flats alternative site examined in the 1978 CCC study of potential offshore LNG terminal sites and technologies. The proposed Project shore crossing at the Reliant Ormond Beach Generating Station is preferable to the Reliant Mandalay Generating Station Shore Crossing because there are many more sensitive species that could be adversely impacted within or adjacent to the latter shore crossing ROW than the former. The Center Road Pipeline is preferable to the Gonzales Road Pipeline because during its construction it would affect fewer people and less traffic would be disrupted on significant thoroughfares.

Facts Supporting the Finding(s)

Located 6.9 NM (7.9 miles or 12.8 km) offshore of Pitas Point in the eastern Santa Barbara Channel, this site was determined by the CCC to be one of the most appropriate sites in California for a floating facility or a gravity-based structure based on the selection criteria described in Section 3.3.7, “Specific California Locations.” The CCC determined that this location would be the "most appropriate siting area off the shoreline of California ... [and][o]nly the floating type of offshore LNG terminal could be placed with confidence in this area because it is not dependent on favorable seismic and soil conditions of the sea bottom." The CCC report also notes that "[b]ecause of the site's distance from shore, a floating LNG terminal on the southeast Ventura Flats would have minimal adverse impacts on sensitive marine resources and public recreation along the coast. It would be visible on clear days from about 25 miles (40 km) of coastline, but it would look like a large tanker and would be beyond the ten offshore oil production platforms in the area. Another advantage is that there would be a comparatively short underwater gas pipeline to the Oxnard area that would not cross major earthquake faults."

While the proposed Project could be built at either location, the proposed Project location is environmentally preferable to the Santa Barbara Channel alternative. For example, the proposed Project FSRU location is farther from land than the Santa Barbara Channel alternative. As a result, this location would have less of a visual impact; fewer potential conflicts with recreational fishers, boaters, marine mammals; and less of an impact on commercial fishing and marine traffic. Although the alternative also poses a greater potential for conflict with the operations of the Navy Sea Range

Point Mugu, these impacts can be mitigated by coordination and communication with the Navy.

Therefore, the CSLC rejects this alternative because, on balance, it would not avoid or substantially lessen many of the impacts of the proposed Project, and as to onshore related issues such as public safety, it would have greater impacts than the proposed Project.

FINDING FOR CENTER ROAD PIPELINE ALTERNATIVE 1

Description: The Center Road Pipeline Alternative 1 was the proposed route in the original application. This alternative would follow existing utility ROWs and/or public roads as follows:

- Begin at the new metering station adjacent to the Reliant Energy Ormond Beach Generating Station shore crossing and then run northeast and north along the SoCalGas and Southern California Edison ROW and northeast on Pleasant Valley Road and then north on Rice Avenue;
- From Rice Avenue, proceed west on Gonzales Road, northeast on Rose Avenue, and under U.S. 101; and
- From the highway, proceed northeast on Rose Avenue, southeast and northeast on Los Angeles Avenue, north on La Vista Avenue, and west on Center Road to the Center Road Valve Station.

Finding(s): The CSLC rejects this alternative because the proposed Project pipeline route is environmentally preferable to Center Road Pipeline Alternative 1 because it would result in fewer impacts to residences and businesses, and the impacts to agriculture and terrestrial biological resources can be mitigated. This alternative was retained for evaluation because it was the route proposed in the original application. The proposed Project pipeline route is preferable because it would result in fewer impacts to residences and businesses, and the impacts to agriculture and terrestrial biological resources can be mitigated.

Facts Supporting the Finding(s)

The Applicant originally proposed Center Road Alternative 1 as the Project. However, during public scoping, many concerns were expressed regarding this route, and the Applicant developed a new Center Road proposed route. In response to comments on the October 2004 Draft EIS/EIR, another proposed Center Road route was developed that avoids passing by Mesa Union School. Center Road Alternative 3 is the former proposed Center Road route described in the October 2004 Draft EIS/EIR. All the other Center Road alternative routes pass adjacent to the Mesa Union School. Although any

of the four pipeline alternatives could be built, the proposed Project would avoid many of the construction related disturbances that affect the public because it would be constructed in existing roadways and other ROWs primarily through agricultural areas and it would avoid Mesa Union School.

Center Road Alternative 1 is longer and would affect more High Consequence Areas than the proposed route. Since Center Road Alternative traverses more developed and urban areas than the proposed Project, it would have more adverse effects to businesses and residences along the pipeline route during construction due to increased traffic, noise, and vibrations; however there would be fewer impacts to agricultural lands, wetlands, and terrestrial biota. Similar to Center Road Alternative 1, the Gonzales Road Alternative traverses urban and residential areas and has similar effects.

FINDING FOR CENTER ROAD CENTER ROAD PIPELINE ALTERNATIVE 2

Description: Alternative 2 would follow existing utility ROWs, public roads, and/or newly acquired easements as described below. This alternative would avoid existing areas of dense residential housing.

- Begin at the new metering station adjacent to the Reliant Energy Ormond Beach Generating Station shore crossing and then run northeast and north along the SoCalGas and SCE ROW, east on Hueneme Road, north on Naumann Road, west on Etting Road, north on Hailes Road to Pleasant Valley Road, and north along Wolff Road;
- At the intersection of Wolff and Sturgis Roads, continue north through agricultural fields, cross U.S. 101, and proceed northeast through agricultural fields to Central Avenue;
- At Central Avenue, head northwest, and in alignment with Beardsley Road, head northeast for approximately 0.25 mile (0.4 km), then northwest along a flood control channel (the Santa Clara Diversion) to Santa Clara Avenue; and
- Follow Santa Clara Avenue northeast and then continue northeast at Los Angeles Avenue, north at La Vista Avenue, and west at Center Road, to terminate at the Center Road Valve Station.

Finding(s): The CSLC rejects this alternative because it would be similar to the pipeline route for the proposed Project, but would not have environmental advantages. This alternative was retained for further evaluation because it avoids most of the population centers in Oxnard and Ventura County and traverses mostly agricultural areas. There are relatively small differences between this pipeline

and the proposed route so either pipeline could be environmentally acceptable.

Facts Supporting the Finding(s)

In response to comments on the October 2004 Draft EIS/EIR, a new proposed Center Road route was developed that avoids passing by Mesa Union School. Center Road Alternative 2 passes adjacent to the Mesa Union School.

Center Road Alternative 2 poses fewer impacts on businesses; however, this is a minor difference. It crosses several more acres of jurisdictional water bodies. It also follows Pleasant Valley Road for a greater distance, which could have greater traffic impacts. Overall, these are relatively small differences, and either pipeline could be environmentally acceptable.

FINDING FOR CENTER ROAD CENTER ROAD PIPELINE ALTERNATIVE 3

Description: Alternative 3 is the former proposed Center Road route described in the October 2004 Draft EIS/EIR. Like the other alternative routes, Alternative 3 would follow existing utility ROWs, public roads, and/or newly acquired easements as described below. This alternative would avoid existing areas of dense residential housing.

- Begin at the new metering station adjacent to the Reliant Energy Ormond Beach Generating Station shore crossing and then run northeast and north along the SoCalGas and SCE ROW, east on Hueneme Road, north on Naumann Road, west on Etting Road, north on Hailes Road to Pleasant Valley Road;
- At Pleasant Valley Road, head southwest for approximately 1,000 feet (305 m) and then turn north through agricultural fields, cross State Route 34 (5th Street), continue north along Del Norte Boulevard, and cross Sturgis Road to U.S. 101;
- At U.S. 101, travel east along the frontage road, then turn north and cross U.S. 101, then it would proceed northeast to Central Avenue, turn southeast along Central Avenue, northeast along Beardsley Road for approximately 0.25 mile (0.4 km), and northwest along a flood control channel (the Santa Clara Diversion) to Santa Clara Avenue; and
- Follow Santa Clara Avenue northeast, then continue northeast at Los Angeles Avenue, north at La Vista Avenue, west at Center Road, and terminate at the Center Road Valve Station.

Finding(s): The CSLC rejects this alternative because the proposed Project route is preferable in that it avoids passing adjacent to the Mesa Union School; however, Center Road Alternative 3 crosses fewer water features than the proposed Project. This alternative was retained for further evaluation because it avoids most of the population centers in Oxnard and Ventura County; it traverses mostly agricultural areas; and it was one of the formerly proposed routes.

Facts Supporting the Finding(s)

Center Road Alternative 3 is the former proposed Center Road route described in the October 2004 Draft EIS/EIR. Center Road Alternative 3 follows the same route as the proposed Center Road Alternative until the corner of Los Angeles and Santa Clara Avenues where this alternative continues up Santa Clara Avenue and turns on La Vista.

FINDING FOR LINE 225 PIPELINE LOOP ALTERNATIVE

Description: The proposed Line 225 Pipeline Loop Alternative 1 would follow the same route as the proposed route from Quigley Valve Station to MP 4.75, where it would continue northwest on State Route 126 (Magic Mountain Parkway). This alternative would veer northwest around MP 5.5, following the SoCalGas ROW and terminating at Honor Rancho Valve Station #9A. It would cross the Santa Clara River at approximately MP 5.7 using an existing pipe bridge.

Finding(s): The CSLC rejects this alternative because it would have greater potential impacts to terrestrial biota than the proposed Project. It was retained for further evaluation because the route would be shorter, would traverse open land, and would provide an alternative stream crossing location.

Facts Supporting the Finding(s)

The Line 225 Pipeline Loop Alternative follows the same route as the proposed Line 225 Pipeline Loop from MP 0.0 to MP 4.8 and MP 6.8 to MP 7.71 of the proposed route. Line 225 Pipeline Loop is preferred because the alternative would disturb a greater area of jurisdictional water bodies and therefore would have greater potential impacts to terrestrial biota.

FINDING FOR POINT MUGU/CASPER ROAD PIPELINE ALTERNATIVE

Description: The Point Mugu Shore Crossing/Casper Road Pipeline Alternative would cross the Naval Base Ventura County (NBVC) Point Mugu to unincorporated lands in Ventura County. The Navy has not endorsed the Project or guaranteed the final routing of this alternative across Navy property. The HDB exit points would be at latitude 34°6.659'N, longitude 119°9.7612'W. These HDB exit

points are in different locations than the ones proposed in the October 2004 EIS/EIR and are closer to the shore crossing.

This alternative would also include two 24-inch (0.6 m) pipelines that would extend from the offshore HDB exit points approximately 0.8 mile (1.3 km) to the HDB entry points on NBVC Point Mugu. HDB also would be used to install pipelines to a proposed new metering station located approximately 0.8 mile (1.3 km) at the southern end of Casper Road. The two 24-inch (0.6 m) diameter natural gas pipelines would terminate at the metering station. Approximately 1.5 miles (2.4 km) of additional pipeline would be installed from the new metering station to MP 2.4 of the proposed Center Road Pipeline along Hueneme Road. The total pipeline length would be approximately 3.7 miles (6 km). The HDB entry point would be in an area of the NBVC Point Mugu that was previously disturbed. Most construction and maintenance activities would occur on a remote portion of NBVC Point Mugu instead of a public beach.

Finding(s): The CSLC rejects this alternative because the proposed Project pipeline route is environmentally preferable. The Point Mugu site offers the benefit of controlled access during the HDB operations and no beach users would be affected. However, construction would need to be scheduled to avoid sensitive species that use the beach, which would be avoided at the Reliant Ormond Beach facility because the land is already disturbed.

FACTS SUPPORTING THE FINDING(S)

The Point Mugu Alternatives would be constructed on undeveloped, moderately developed, and agricultural lands. As a result, the Point Mugu shore crossings would have greater potential impacts to sensitive terrestrial biota than at the proposed Project shore crossing location. Construction at the proposed Project or the Point Mugu shore crossing location would not limit access or parking at Ormond Beach.

The Point Mugu odorant station and metering station be located outside the Point Mugu facility, which makes it slightly less preferable. The Point Mugu odorant and metering stations would not be guarded. While the risks of an accident involving a release of either the odorant or unodorized natural gas is very small, the secure and secluded nature of the Reliant Ormond Beach station makes it preferable to the Arnold Road or Point Mugu locations. The metering station for the Point Mugu Alternative would be built on agricultural lands and therefore would result in the permanent conversion of agricultural land to non-agricultural uses.

Due to their distances from residences and other features, the noise and vibration generated by the Arnold Road and Point Mugu alternatives would have fewer adverse effects that the proposed Project.

FINDING FOR ARNOLD ROAD SHORE CROSSING/ARNOLD ROAD PIPELINE ALTERNATIVE

Description: The Arnold Road Shore Crossing/Arnold Road Pipeline Alternative would also include two 24-inch pipelines and would begin approximately at the HDB exit points and end at a connection at approximately MP 1.9 of the proposed Center Road Pipeline route at Hueneme Road and Arnold Road. The HDB exit points would be at approximately the same location as the HDB exit points from the Point Mugu Shore Crossing, at latitude 34°6.6779'N, longitude 119°9.967'W.

This alternative would extend from the offshore HDB exit points approximately 1.06 miles (1.7 km) to the HDB entry points located approximately 1,000 feet (305 m) inland from the shoreline, near the end of Arnold Road, on lands in unincorporated Ventura County. From the HDB entry points, HDB also would be used to install the pipeline to the surface facility located approximately 0.6 mile (1.0 km) inland along Arnold Road on previously developed lands. The two 24-inch (0.6 m) diameter natural gas pipelines would terminate at the metering station.

Approximately 1.9 miles (3.1 km) of additional pipeline would be installed, using trenching, from the new metering station to MP 1.9 of the proposed Center Road Pipeline along Hueneme Road. Therefore, the total pipeline ROW length would be approximately 3.2 miles (5.1 km).

Finding(s): The CSLC rejects this alternative because the proposed Project pipeline route is environmentally preferable.

Facts Supporting the Finding(s)

The Arnold Road Alternative would be constructed on undeveloped, moderately developed, and agricultural lands. As a result, the Arnold Road crossings would have greater potential impacts to sensitive terrestrial biota than at the proposed Project shore crossing location. Construction at the Arnold Road Alternative would temporarily limit access to Ormond Beach and parking for recreational beach users, while construction at the proposed Project or the Point Mugu shore crossing location would not limit access or parking at Ormond Beach.

Although the Arnold Road metering station and odorant facility would be fenced, it would not be guarded as it would in its proposed location within the Reliant generating plant site. The Arnold Road odorant and metering stations would not be guarded. While the risks of an accident involving a release of either the odorant or unodorized

natural gas is very small, the secure and secluded nature of the Reliant station makes it preferable to the Arnold Road or Point Mugu locations. The metering station for the Arnold Road Alternatives would be built on agricultural lands and therefore would result in the permanent conversion of agricultural land to non-agricultural uses.

Due to their distances from residences and other features, the noise and vibration generated by the Arnold Road and Point Mugu alternatives would have fewer adverse effects that the proposed Project.

Although the Casper Road and Arnold Road Pipelines that would connect the respective shore crossings with the Center Road Pipeline would both be shorter than the proposed Project, the difference in length is insignificant when the fact that the pipelines would be installed in existing road rights-of-way is considered.

For these reasons, the proposed Project is environmentally preferable.

1.6 FINDINGS FOR GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Per the CEQA (section 15126.2(d)), the Final EIR discusses ways in which the proposed Project could foster economic or population growth or induce additional housing, either directly or indirectly, in the surrounding area.

Most projects could induce growth in areas they are located. The following summarizes the analysis in the Final EIR:

ECONOMIC/POPULATION GROWTH EFFECTS

The Project will not foster economic or population growth. The Project area is currently served by numerous natural gas suppliers and economic activity is already in place. The demand for energy, as projected by the CEC, is due to existing customer demand and projected regional development. The Project, along with other energy projects, would increase the supply of natural gas to the region to meet this projected need for additional natural gas, but the Project in and of itself would not have induced the projected growth in demand for natural gas. Although the availability of a new or alternate source of natural gas could contribute to stimulating economic or population growth in the area, the natural gas supplied by Cabrillo Port would not be the sole supply of natural gas to the area. Therefore, the additional gas supplied by the proposed Project would not have intrinsic growth-inducing impacts.

EMPLOYMENT EFFECTS

The Project will provide new employment; however, the limited increase in employment is not expected to stimulate the construction of new housing that would result in physical impacts. Construction of the proposed Project would provide temporary employment for up to 200 workers for approximately 35 days for the offshore pipelines. Construction of the offshore pipelines would require up to 200 to 240 workers for approximately nine months.

The FSRU would have an operations crew of about 30 persons that would be rotated from Port Hueneme every seven days. No new employees would be required to operate the onshore pipelines.

EFFECTS ON ACCESS TO UNDEVELOPED OR UNDERDEVELOPED AREAS

The Project will not provide access to undeveloped or underdeveloped areas. The Project would not involve the construction of new roads. The Project would use existing rights-of-way and roads.

PUBLIC SERVICE EFFECTS

The proposed Project would not supply natural gas to any area that is previously unserved. The primary result of the Project would be to meet increased energy demand from existing customers.

TAX IMPLICATIONS FOR EXISTING COMMUNITIES

The Project will not tax existing community services. The number of non-local workers would be small relative to current population in the Project area. Given that the additional local work force would be at most 60 workers on alternating weekly work schedules, there would not be the need for new housing or services. Local communities have sufficient infrastructure to meet the needs of non-local workers.

DEVELOPMENT EFFECTS

The Project will not cause development elsewhere, however, the purpose of the proposed Project is to meet anticipated baseload energy demand from existing customers as well as new and expanding businesses within the context of the Southern California economy.

1.7 FINDINGS FOR CUMULATIVE IMPACTS

The State CEQA Guidelines at section 15130 require an analysis of a project's contribution to significant cumulative impacts. Cumulative refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines, section 15355).

Projects identified in the Final EIR that are considered, in conjunction with the incremental impacts of the proposed Project to add to cumulative impacts include:

- **OTHER OFFSHORE PROJECTS**
  - Channel Islands National Marine Sanctuary Boundary Expansion
  - Point Mugu Sea Range Operations
  - SOCAL Range Complex
  - Port of Los Angeles/Long Beach Expansions

- **OTHER ONSHORE PROJECTS**
  - Ventura County
  - City of Oxnard
    - California State Coastal Conservancy Ormond Beach Wetland Restoration Project
    - Salination Management Project
    - Ground Water Recharge Enhancement and Treatment Program
  - Santa Clarita and Santa Clara River
    - Riverpark Development: Construction of Residential Units
    - Natural River Management Plan
    - Other Projects along the Santa Clara River

1.6.1 Resource-Specific Cumulative Impacts and Significance Levels

The following subsections describe the cumulative effects, and their potential significance, that the proposed Project would have, in combination with the other projects (noted above in Sections 1.6.1, "Other Offshore Projects" and 1.6.2, "Other Onshore Projects" in the Final EIR), on public safety, marine traffic, aesthetics, agriculture, air quality, marine and terrestrial biological resources, cultural resources, energy resources, geologic hazards, hazardous materials use, land use, noise, recreation, transportation, and water quality and sediments. For those areas in which the proposed Project is described to have an incremental effect that is Class 1, the incremental effect is deemed to be cumulatively considerable, even with imposition of described mitigation measures. For those areas in which the proposed Project is described to have an incremental effect that is Class 2, the incremental effect of the proposed Project is rendered less than cumulatively considerable through the imposition of the described mitigation measures.

PUBLIC SAFETY

Several of the potential cumulative impacts that might affect the safety of the public are addressed elsewhere in this section. For example, if Clearwater Port and OceanWay were licensed and constructed concurrently with the proposed Project, marine traffic would increase, which could lead to a temporary increase in marine accidents that could result in public injuries or fatalities. These potential effects on public safety are included in the discussion of potential cumulative impacts for marine traffic. Similarly, the potential for increased numbers of vehicle accidents is addressed in the transportation discussion.

If Cabrillo Port and one or both Clearwater Port and OceanWay projects were built, there could be a simultaneous accident or release related to such pipelines. Since the offshore pipelines for the Cabrillo Port Santa Barbara Channel Alternative and the

Clearwater Port project would be in the same pipeline right-of-way, accidents associated with one pipeline could potentially affect the other pipeline.

The potential magnitude of that increase has not been quantified, but mitigation measures noted in Section 4.2, "Public Safety: Hazards and Risk Analysis," and Section 4.3, "Marine Traffic," would be expected to keep the estimated annual frequency of such an accident occurring to levels similar to those of the projects individually.

The likelihood of an accident occurring at a single deepwater port is low. The increase in the probability of such an accident due to the cumulative impacts of the presence of three deepwater ports (Cabrillo Port, Clearwater Port, and OceanWay) would not measurably increase the potential risks to members of the boating public.

The potential for cumulative impacts from simultaneous incidents involving more than one deepwater port—at either the Cabrillo Port proposed location or the Santa Barbara Channel Alternative plus either Clearwater Port or the OceanWay project—would be limited to intentional acts. Mitigating actions by port authorities, the U.S. Coast Guard (USCG), local emergency response agencies, and additional forces or actions that might be deployed using military resources would be expected to limit the potential impacts from such an attack. Incident command strategies for handling multiple incidents would be expected to allocate response resources to first address any situation posing an imminent hazard to public safety or the environment.

This might result in allocating more resources to handle emergency conditions closer to shore than the Cabrillo Port FSRU. The incident commander would know that the worst credible case impacts from the release and ignition of LNG on board the FSRU would not extend as close to shore as a potential incident at Clearwater Port. However, the operation of a second or third deepwater port does not create cumulatively greater impacts on public safety compared to the operation of just a single deepwater port in this area but does represent an incremental risk. Although the probability of an offshore incident associated with the proposed Project is very low, such an incident could result in serious injury or fatality to members of the general public. The impacts would still be potentially significant, should an incident occur; therefore, this impact remains significant after mitigation.

Onshore, the pipelines from the Cabrillo Port and Clearwater Port would be in separate pipeline corridors, except potentially within approximately 2 miles (3.2 km) of the Center Road Valve Station. However, the route of the Clearwater Port project onshore pipeline corridor is preliminary and could change during its environmental review. The onshore pipeline route for the OceanWay project would be more than 43 miles (69.5 km) from the proposed Center Road Pipeline route. If the Clearwater Port project onshore pipelines were routed in the same corridor as the Center Road Pipeline route, the potential cumulative impacts would be limited to the potential consequences from: (1) intentional damage to one or more natural gas pipelines located close to one another, and (2) initiation of more than one event at different locations along the pipelines. These cumulative impacts would be similar for all Center Road pipeline alternatives,

except the Gonzales Road Pipeline Alternative. The Gonzales Road Pipeline Alternative and the Clearwater Port onshore pipelines could be within the same corridor for much of their routes.

The impacts on public safety from the rupture of a natural gas pipeline depend on the specific characteristics of the pipeline, e.g., pipe diameter and pipeline pressure. Should more than one pipeline in a particular area be affected, the effects would potentially overlap, but would not likely combine to produce a greater effect. Emergency planning and preparedness efforts involving the Applicant, SoCalGas, and local response agencies would reduce the potential consequences from such an event. The probability of an offshore or onshore pipeline incident associated with the proposed Project is very low. Should such an incident occur, however, the impacts would still be significant, i.e., could cause serious injury or fatality to members of the public. Therefore, this impact would remain significant after mitigation (**Class I**).

MARINE TRAFFIC

The Project would increase maritime traffic in the area. Flight and marine operations at the Point Mugu Sea Range are ongoing, but not continuous (see Section 4.3.1.1). However, Project operations could be adjusted to suit naval operations. Construction of the proposed Project would have to be coordinated daily with the Navy (MM MT-5c) and would be further mitigated by avoiding the Point Mugu Sea Range as much as possible (MM MT-5a), monitoring Navy Securite broadcasts (MM MT-5d) and daily safety briefings (MM MT-5b); therefore, these impacts from Navy operations in conjunction with the construction of the proposed Project would increase traffic temporarily but would be mitigated below the level of significance (**CEQA Class II**). These potential cumulative effects would be slightly less during construction if the Cabrillo Port Santa Barbara Channel Alternative were to be implemented because no portion of the offshore pipeline route would cross the Point Mugu Sea Range. Since neither the OceanWay or Clearwater Port projects' potential pipeline routes would cross the Point Mugu Sea Range, they would not contribute to direct impacts on the Sea Range during construction; however, vessel traffic could temporarily increase.

During operations of the proposed Project, Navy operations at the SOCAL Range Complex or Point Mugu Sea Range could increase maritime traffic locally or along the LNG carrier routes or it could cause vessel traffic to temporarily cease along the LNG carrier routes. To mitigate the potential cumulative effects of increased vessel traffic, the Applicant would coordinate with the Navy (MM MT-6c), supply the Navy with the LNG carrier schedule (MM MT-6b), and follow Navy Securite broadcasts (MM MT-6a) (**CEQA Class II**). If the Clearwater Port, OceanWay, and SES Port of Long Beach projects were to be licensed and constructed, LNG carrier traffic would increase through the SOCAL Range Complex or the Point Mugu Sea Range. This increase would coincide with an anticipated increase in vessel traffic to the Ports of Long Beach/Los Angeles, described below.

Since no security zones would be required for LNG carriers traveling outside of Federal waters, Navy vessels would not have to take any extraordinary measures when

encountering the LNG carriers on the Point Mugu Sea Range. As described in Section 4.3.1.1, the Navy conducts over 17,000 activities on the Point Mugu Sea Range annually. LNG carriers bound for each of the proposed LNG facilities would have to transit portions of the Point Mugu Sea Range or the SOCAL complex. To ensure that Navy operations would not be disrupted by the presence of LNG carriers transiting to or from any of the facilities, each Applicant would have to closely coordinate its LNG carrier schedules with the Navy. All of the proposed LNG facilities are proposed to be located outside of the Point Mugu Sea Range and the SOCAL Complex; therefore, operations at the facilities themselves should not interfere with normal Navy operations.

The planned expansion of the Port of Long Beach would mean that vessel traffic could increase in the Santa Barbara Channel TSS and along trans-Pacific routes. The cumulative effect of the expansion and the proposed Project on vessel traffic in the area would be a net increase in vessel traffic; however, the Project's contribution would not be significant. LNG carriers bound for the FSRU would not enter the Santa Barbara TSS and Project support vessels would only travel in the Santa Barbara TSS for a short distance while transiting to and from Port Hueneme several times a week. The cumulative impacts of the implementation of the Cabrillo Port Santa Barbara Channel Alternative would be greater and potentially significant because LNG carriers bound for this location would have to cross the Santa Barbara TSS. In addition, these LNG carriers would possibly be surrounded by a security zone within 12 NM (13.8 miles or 22.2 km) of shore.

All current activities associated with oil and gas leases are included in the marine traffic discussion in Section 4.3, "Marine Traffic." Since most activities associated with oil and gas leases are currently suspended due to pending litigation, it would be speculative to assess their potential cumulative impact on maritime traffic during operations.

If the Clearwater Port and OceanWay were licensed, vessel traffic in the area would increase substantially, but temporarily, during the construction phase and would increase on a regular basis during operations involving the transit of LNG carriers and supply vessels, with impacts comparable to the proposed Project. If the proposed Project and either the Clearwater Port or the OceanWay project were to be constructed simultaneously, short-term increases in marine traffic in the region would result. The distance between the proposed Project, OceanWay, and Clearwater Port would be 14.66 NM (16.9 mi., 27.2 km) and 28.9 NM (33.3 miles or 53.5 km), respectively. The distance between the shore crossing for the proposed offshore pipeline routes and the Clearwater Port pipelines would be approximately 7 miles (11.3 km) and to OceanWay's shore crossing would be approximately 43 miles (69.5 km); therefore, increased vessel traffic would be in discrete areas.

The Port of Hueneme would experience increased vessel traffic since both Clearwater Port and the proposed Project or the Cabrillo Port Santa Barbara Channel Alternative would use it. The OceanWay project is not likely to use Port Hueneme. If the proposed Project were to be constructed at either offshore location, it would have significant adverse long-term impacts that would be mitigated through MT-7a, MT-7b, and MT-7c.

The Clearwater Port project is likely to have similar impacts and would have to implement similar mitigation measures to reduce potential cumulative impacts.

In contrast to the proposed Project, construction of Clearwater Port would not involve installation of a pipeline across the vessel traffic separation scheme. Since vessel traffic would increase if the two projects were constructed simultaneously, potential cumulative impacts would be significant (**CEQA Class II**); however, implementation of the construction-related mitigation measures (MT-1a through -1g) would reduce the potential cumulative impacts to a level below the impact's significance criteria.

If the Cabrillo Port Santa Barbara Channel Alternative and the Clearwater Port project were constructed simultaneously, vessel traffic in the vicinity of Platform Grace would temporarily increase substantially. Since the pipelines from both projects would likely be installed in the same existing pipeline right-of-way, the risk of vessel collisions would increase due to the proximity of the projects. Close coordination would be required if this alternative and the Clearwater Port were to be constructed simultaneously. Implementation of the construction-related mitigation measures (MT-1a through -1g) would reduce the potential cumulative impacts, but the impacts would be moderate adverse and temporary (**CEQA Class II**).

If the three offshore LNG projects (Cabrillo Port, Clearwater Port, and OceanWay) were to operate simultaneously, LNG carrier traffic in the area would increase. The LNG carrier routes for the OceanWay and Clearwater Port projects are preliminary and could change during the environmental review process. The OceanWay project would receive LNG from Australia; therefore, the routes would likely be trans-Pacific and would not approach closer to shore than the facility (22 miles offshore Los Angeles). Since Clearwater Port could be receiving LNG from Alaska, Southeast Asia, or the Middle East, the exact route that the LNG carriers would take to approach the Port is unknown. Any LNG carrier approaching it would either have to travel in the Santa Barbara TSS or cross it. Given the location of Clearwater Port (10.9 NM [12.6 miles or 20.3 km] offshore), a security zone could possibly surround any LNG carrier approaching this facility once it were within 12 NM (13.8 miles or 22.2 km) of shore; this could cause a temporary disruption in vessel traffic in the TSS. LNG carriers destined for Cabrillo Port or OceanWay would not enter the TSS or have security zones surrounding them because these carriers would not enter Federal waters.

If an LNG terminal were built at the Port of Long Beach, LNG carriers could use vessel approach routes similar to those for the proposed Project to enter the vessel traffic separation scheme. Assuming that the LNG carriers to the Port of Long Beach would either have a trans-Pacific or south to north route, Project LNG carriers may have overlapping routes in the southern Channel Islands. LNG carriers destined to Clearwater Port also could use this route. Due to the possibility that security zones could surround each LNG carrier in Federal waters, vessel traffic could be disrupted regularly with the approach of multiple LNG carriers to the vessel traffic separation scheme. Cumulative impacts would be significant but mitigable (**CEQA Class II**) with coordination of LNG carrier approaches with the Captain of the Port of Los Angeles/Long Beach.

AESTHETICS

Offshore

The presence of vessels and platforms in the Pacific Ocean off the coast of California is not new; the presence of LNG carriers, however, would be new but would be similar to other large ships that currently traverse the area (see Section 4.4, "Aesthetics"). Large numbers of ocean vessels, naval ships, and recreational ships traveling to and from the ports of Long Beach, Los Angeles, San Diego, Hueneme, and San Francisco travel along the coast during the day and night. From the nearest point on the coast, Platform Grace is about 10.9 NM [12.6 miles or 20.3 km] offshore and 28.9 NM (33.3 miles or 53.5 km) from the proposed FSRU and would not contribute to cumulative aesthetic impacts. However, if Clearwater Port were approved, Platform Grace would continue to be used, and auxiliary docking structures would be added to the platform. In addition, one or more LNG carriers would regularly be docked at the facility. Therefore, the presence of Platform Grace would continue to have a long-term aesthetic impact in the region as a whole. The OceanWay project would be approximately 22 miles offshore and 14.66 NM (16.9 miles or 27.2 km) from the FSRU; therefore, it would also have a long-term aesthetic impact on the region because a vessel would be present the majority of the time.

No known offshore projects would be constructed simultaneously with the installation of the Cabrillo Port FSRU and the offshore pipelines. AM BioMar-3a would reduce the potential effects of lighting associated with construction and installation of the FSRU to a level that is less than the significance criteria. Therefore, the cumulative effect of temporary lighting associated with offshore construction would be a **CEQA Class II** impact. Once installed, the FSRU would be lit at night, as would large vessels transiting the Santa Barbara TSS. Onshore residents are accustomed to the presence of vessels at night in the TSS. The cumulative impact of the presence of the FSRU and vessels transiting the TSS would be mitigated by AM BioMar-3a and the transitory nature of the transiting vessels (**CEQA Class II**).

The long-term presence of the Cabrillo Port FSRU is identified as a CEQA Class I impact for aesthetics associated with the visual expectations of some recreational boaters such as whale watchers who travel near it (see Section 4.4, "Aesthetics"). No mitigation measures would reduce this impact to a level that is less than the significance criteria. The presence of the FSRU in conjunction with permanent changes to Platform Grace from Clearwater Port project (28.9 NM [33.3 miles or 53.5 km] from the Cabrillo Port Project) and the OceanWay project (14.66 NM [16.9 miles or 27.2 km] from the Cabrillo Port Project) is considered a significant regional cumulative aesthetic impact for which no mitigation exists (**CEQA Class I**). Implementation of the Cabrillo Port Santa Barbara Channel Alternative would have similar cumulative aesthetics impacts, but it could be considered incrementally greater than the proposed Project because it would be located only 5.01 NM (5.77 miles or 9.28 km) from the proposed Clearwater Port project.

Agriculture and Soil

According to the California Department of Conservation, the results of farmland mapping in Ventura County from 2000 to 2002 resulted in the reclassification of 2,011 acres (814 ha) of agricultural land, mostly for urban uses. Urban acreage increased by 2,557 acres (1,035 ha). Data from 1990 to 2002 indicate a net increase of more than 11,800 urban acres (4,775 ha) and a decline of almost 8,700 farmland acres (3,521 ha). City reports show that an additional 7,500 acres (3,035 ha) is committed to future non-agricultural use (California Department of Conservation 2004).

The Clearwater Port would have effects similar to those of the proposed Cabrillo Port Project. Assuming that similar construction techniques are used as are proposed for the Cabrillo Port Project, the Clearwater Port onshore pipeline would likely be installed in some agricultural lands, but these areas would only be disturbed temporarily. It is uncertain whether there would be any permanent conversion of agricultural lands for permanent facilities; however, any conversion of agricultural land for the Clearwater Port project is likely to be similar to the proposed Project. The proposed Project in Ventura County would permanently convert less than 1 acre of Prime Farmland soils from agricultural to non-agricultural uses. Many of the proposed and pending development projects in Oxnard and Ventura County, such as the Ormond Beach Specific Plan, also could convert agricultural land to non-agricultural uses. Conversion of soils classified as either Prime Farmland or Soils of Statewide Importance is considered a significant impact; therefore, the combined impacts of the Project with the potential of conversion of these types of soils with the Clearwater Port project and other development projects in Oxnard and Ventura County would have a significant cumulative impact on agricultural soils (**CEQA Class I**).

The cumulative impacts of the Center Road Pipeline Alternatives 1, 2, and 3 and the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative would have similar impacts as those of the proposed Project; however, the cumulative impacts of the implementation of either the Point Mugu Shore Crossing/Casper Road Pipeline and the Arnold Road Shore Crossing/Arnold Road Pipeline would have slightly greater impacts on agriculture because a larger acreage of agricultural land would be converted to non-agricultural use. All of these alternatives would have **CEQA Class I** impacts due to the conversion of the agricultural land to non-agricultural use. Similar to the proposed Line 225 Pipeline Loop, the Line 225 Pipeline Loop Alternative would not have adverse impacts on agricultural lands and would not contribute to cumulative effects.

AIR QUALITY

Clearwater Port LNG Importation Facility and OceanWay LNG Importation Facility

If either the Clearwater Port project or the OceanWay project were approved, the facilities would emit air pollutants during construction and normal operation. Since the quantity and locations of these emissions have not been quantified, it is not possible to fully characterize associated air quality impacts. Potentially significant cumulative

regional air quality impacts due to the Clearwater Port and the Cabrillo Port Project at either the proposed location or the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative could be expected. Cumulative impacts from the proposed Project and the Clearwater Port or the OceanWay project could have significant adverse effects on air quality in Ventura and Los Angeles counties unless sufficient emission reductions were identified. However, the exact nature of these cumulative impacts is difficult to determine because an air quality analysis comparable to that done for the proposed Project has not yet been performed for the Clearwater Port project or the OceanWay project.

The proposed Project, if constructed at either the proposed or alternative offshore location, would cause significant adverse effects during construction in Ventura County (**CEQA Class I**). If the Clearwater Port project were constructed simultaneously, it is likely to contribute further to the degradation of air quality in Ventura County. Simultaneous construction during the OceanWay project is not likely to contribute adversely to air quality in Ventura County because it would cross Los Angeles County waters at a sufficient distance that the contribution is likely to be negligible.

Onshore Residential and Commercial Development

Residential and commercial development is planned for Oxnard and Santa Clarita. If these developments were to occur concurrently with the proposed Project, local air quality could be temporarily diminished. However, the air quality analyses conducted for the Project indicate that significant air quality impacts would occur only in close proximity to construction activities. Therefore, the cumulative impacts of the Cabrillo Port Project or any of the onshore alternatives with concurrent residential and commercial development immediately adjacent to pipeline construction potentially would have significant adverse air quality impacts (**CEQA Class I**).

Greenhouse Gas Emissions

The Cabrillo Port Project or any of the onshore or offshore alternatives would generate emissions of greenhouse gases that contribute to global warming. The majority of emissions of greenhouse gases would be carbon dioxide (CO_2). Project operations would cause annual CO_2 emissions of 0.33 million tons per year (MMtons/yr). Start-up and construction activities would result in one-time CO_2 emissions of 0.010 MMtons and 0.017 MMtons, respectively. These emissions represent less than 0.08 percent of the 431 MMtons of CO_2-equivalent greenhouse gas emissions produced in California in 2004 (CEC 2006). The greenhouse gas emissions from the Project would be insignificant alone, but could exacerbate, in combination with existing or other proposed projects, global warming effects.

BIOLOGICAL RESOURCES – MARINE

Marine Mammals

Potential cumulative impacts from the proposed Cabrillo Port Project in conjunction with other offshore projects include the effects of additional vessel or aircraft noise on marine

mammals. Ships traveling throughout the area may produce sufficient underwater noise to cause changes in certain whale behavior. According to Carretta et al. (2002), increasing levels of man-made noise in the world's oceans has been suggested to be a habitat concern for whales and particularly for baleen whales, which may communicate using low-frequency sound. Such sounds may not only affect communications but also may cause whales to divert from normal migration paths or to stop feeding or reproductive activities. The sounds may also reduce the abilities of marine mammals and sea turtles to detect prey or predators and, in the case of odontocetes, the ability to navigate.

Cabrillo Port would be 3.54 NM (4.1 miles or 6.6 km) from the southern boundary of the Point Mugu Sea Range and therefore activities that occur at the Port could contribute to cumulative effects within the Sea Range because the FSRU's zone of noise influence (the distance from the FSRU that noise generated at FSRU would attenuate to background) would extend more than 3.54 NM (4.1 miles or 6.6 km) under some operation conditions (see Section 4.14, "Noise and Vibration"). Naval vessels at the Point Mugu Sea Range or commercial vessels transiting the area may temporarily disrupt whale migrations or feeding. Other activities at the Point Mugu Sea Range are described above and were considered in the U.S. Navy's EIS for the Point Mugu Sea Range (U.S. Navy 2002). Studies associated with these projects indicate that these activities would not have noise impacts on marine mammals. The proposed Project would increase noise temporarily in the immediate Project site during construction activities. The incremental contribution of the proposed Project would not increase the cumulative effects of noise on marine mammals. Implementation of AM BioMar-9a and AM BioMar-9b, which would ensure that offshore construction activities would occur outside the gray whale migration season and that all construction and operational vessels would carry two qualified marine mammal monitors, would further ensure that the Project's contribution to the cumulative effects would be reduced below the significance criteria for marine mammal impacts (**CEQA Class II**).

If the proposed Clearwater Port were licensed and constructed, vessel traffic and noise associated with vessel traffic and operations of the facility would increase; however, the potential contribution of the proposed Cabrillo Port Project would be reduced to below its significance criteria through the use of marine mammal monitors (**CEQA Class II**). Since Clearwater Port would be constructed at Platform Grace, the area already has vessel traffic servicing the platform and noise from operations on the platform. The exact change in vessel traffic and noise is not known at this time. However, the greatest effects of increased noise would be during marine mammal migration. Construction activities would represent a significant increase in noise over a short period of time. To avoid the potential adverse effects on marine mammals, the proposed Cabrillo Port Project would not be constructed during the gray whale migration season. Any increase in vessel traffic increases the potential risk of vessel/marine mammal collision. Through implementation of marine mammal monitoring during construction and operations, the risk of potential collisions would be reduced to a level less than its significance criteria. It is also presumed that Clearwater Port would be required to implement similar measures.

Because the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative would be located in the Santa Barbara Channel, impacts on marine mammals would be greater than with the proposed Cabrillo Port Project. Section 4.7.5.1 describes the marine mammals that feed, migrate through, and inhabit this area. Due to the greater concentration of marine mammals in this area, the potential for impacts on marine mammals during construction and operation activities would be greater than the proposed Project location and would be adverse. The impacts could be reduced through the implementation of MM BioMar-3b, MM BioMar-3c, MM NOI-1a, MM BioMar-5a, MM BioMar-5b, and MM BioMar-5c, but the impact would be **CEQA Class I**. This alternative would have a greater potential contribution to cumulative impacts on marine resource than the proposed Project location. Since the Clearwater Port project would have the same offshore pipeline corridor as the Cabrillo Port Santa Barbara Channel Alternative, simultaneous construction of these two projects could result in temporary adverse cumulative effects on marine resources in this area.

The impacts from offshore pipeline components of the Point Mugu and Arnold Road shore crossing alternative would be similar to the proposed offshore pipeline route; therefore, the contribution to cumulative impacts on marine mammals would be the same as for the proposed offshore pipeline route.

Benthic Habitats and Communities

The impacts from offshore pipeline components of the Point Mugu and Arnold Road shore crossing alternative would be similar to the proposed route of the offshore pipelines; therefore, the contribution to cumulative impacts on benthic habitats would be the same as for the proposed offshore pipeline route. If the Cabrillo Port Santa Barbara Channel Alternative and the Clearwater Port project were to be constructed simultaneously, then the impacts to the benthic habitat would be greater and concentrated along the same pipeline corridor. This impact would be potentially adverse but temporary (**CEQA Class II**)

Marine Birds

A number of seabird species are known to be attracted to bright lights at night. Such animals sometimes collide with lighted objects, causing them to become stunned, injured, or killed. When they are stunned or injured, they generally fall back into the water, where they fall prey to other seabirds such as gulls and other predators. Xantus's murrelet (*Synthiloboramphus hypoleucus*), a threatened species under the California ESA and a Federal candidate, may be subject to offshore lighting impacts. However, studies indicate very low mean densities of Xantus's murrelet (between 0.04 and 0.1 birds/km^2) offshore in the California Cooperative Oceanic Fisheries Investigations sampling around the Channel Islands. Night-foraging storm petrels and alcids may also be subject to offshore lighting impacts, including the ashy storm petrel (*Oceanodroma melania*) and the rhinoceros auklet (*Cerorhinca monocerata*), which are California species of special concern. Studies show that rhinoceros auklets are found offshore between 0.02 and 0.14 bird/km^2.

Seabirds are highly mobile and would be expected to temporarily leave any area where construction activities are occurring. Generally, they are expected to return to the area immediately after construction activities have ceased. Because of its remote location, the lighting from the FSRU may be seen from shore or from the Channel Islands only on clear nights. The required beacon light would be less visible than the lighting on offshore platforms, including Platform Grace (Clearwater Port), in the Cabrillo Port Santa Barbara Channel. In addition, commercial vessels transiting the Project area at night are also lit. The cumulative impact on marine birds is expected from the proposed Project would be minimal when considered together with the known effects of other projects in the area (**CEQA Class II**).

BIOLOGICAL RESOURCES – TERRESTRIAL

Coastal Zone and Oxnard Plain

The location of the Clearwater Port pipeline shore crossing is preliminary and may change during environmental review; however, the onshore component (staging and drilling equipment) is anticipated to be at the Reliant Energy Mandalay Generating Station. Either horizontal directional drilling (HDD) or HDB would be used to minimize potential adverse effects. Drilling equipment would likely be staged at the Reliant Energy Mandalay Beach Generating Station to avoid disturbance to dunes along the shoreline on Mandalay Beach. The onshore pipeline of the Clearwater Port project would cross the Coastal Zone and Oxnard Plain. From Mandalay Beach, the pipeline to the Center Road Valve Station is anticipated to follow existing ROWs. Potential impacts during pipeline installation or HDD/HDB activities could be an increase in sedimentation and erosion, disturbance of special status bird nesting or other sensitive habitat, direct impact on a special status species potentially occurring within the Clearwater Port project footprint, and temporary or permanent changes to wetlands.

For the Cabrillo Port Project, the Applicant would implement a Drilling Fluid Release Monitoring Plan to reduce impacts on biological resources. Impacts on wildlife would be temporary and mitigated to levels below the impact's significant criteria (**CEQA Class II**) through surveys and monitoring measures. Since the shore crossing for the Clearwater Port project is about 7 miles (11.3 km) from the Project's Ormond Beach shore crossing and the effects of the HDD/HDB activities would be temporary, and because both projects would need to adhere to permitting requirements, there would be no anticipated geographically overlapping effects on biological resources on the respective beaches or species that frequent both beaches. It is assumed that Clearwater Port's impacts and mitigation measures would be similar to those for the Cabrillo Port Project. Cabrillo Port's incremental contribution to cumulative impacts on beach habitat and species that use that habitat would be considered negligible. Both shore crossings for the Clearwater Port project and the Cabrillo Port Santa Barbara Alternative would be at the Reliant Energy Mandalay Beach Generating Station; therefore, simultaneous construction of these projects would result in greater potential cumulative impacts.

In general, pipeline installation on the Oxnard Plain for both projects would be through developed or agricultural areas. However, the route of the proposed Clearwater Port

onshore pipeline is preliminary and could change during the environmental review process. The pipelines could converge near or at the Central Valve Station. The onshore pipeline associated with Clearwater Port could transit tree rows, wetlands, or near special status species. Both the Cabrillo Port and Clearwater Port onshore pipelines would require permits to cross any stream or wetlands; such permits would stipulate necessary mitigation. Any cumulative effects on terrestrial biological resources in the Oxnard Plain would be reduced below the level of the significance criteria through implementation of mitigation measures such as tree avoidance and replacement (MM TerrBio-2g); riparian avoidance and restoration (MM TerrBio-2f); avoidance and reduction of impacts on wetlands (MM TerrBio-3a); and pre-construction surveys of special status plants (AM TerrBio-2a).

Most of the proposed residential, commercial, and industrial projects in Oxnard are in previously developed areas or agricultural land and are therefore not anticipated to adversely affect terrestrial biological resources as long as best management practices (BMPs) are employed. No potential cumulative effects on terrestrial biological resources would result from these known developments in conjunction with the proposed Project. The one exception is the Ormond Beach Specific Plan, which involves the development of a 920-acre community that extends from Edison Drive on the west to Olds and Arnold Road on the east, West Pleasant Valley Drive on the north and the Pacific Ocean to the south. A plan and an EIR are being developed for this project; therefore, it is not possible to speculate about its potential impacts at this time.

Parts of Ormond Beach are designated critical habitat for western snowy plover, but potential impacts on plover critical habitat would be avoided by the use of HDB. At Ormond Beach, the Coastal Conservancy has acquired land and plans to acquire additional property for a wetland restoration project. The feasibility study for this project is under way. The Coastal Conservancy Wetland Restoration Project, if implemented, would have a net positive effect on the biological resources at Ormond Beach in that wetlands and habitat would be restored, so that area would be more attractive to wildlife resources. To ensure that the proposed Project does not adversely affect the Coastal Conservancy Project, HDB would be used to install pipelines underneath Ormond Beach without disturbing the beach surface. In addition, all construction activities would occur on the Reliant Energy Ormond Beach Generating Station property. Since the proposed Project would not have adverse effects on the Ormond Beach wetlands and the Coastal Conservancy's Wetland Restoration Project would be beneficial to Ormond Beach wetlands, the cumulative effects of both projects would be a net benefit to wetlands on Ormond Beach, if all Project mitigation measures were implemented.

In general, the Gonzales Road Pipeline Alternative has impacts similar to the proposed Center Road Pipeline, with the following exceptions. This alternative would be likely to adversely affect Ventura marsh milk-vetch, a Federal and State endangered species. Therefore, this alternative's cumulative impact on Ventura marsh milk-vetch would be potentially major and would be considered larger than the proposed action's contribution to cumulative impacts. This alternative would cross fewer wetland features than the proposed Project pipeline route, suggesting that the use of this alternative would contribute fewer cumulative impacts on wetlands. The impacts from the Clearwater Port

project onshore pipeline routes could be similar to the Gonzales Road Pipeline Alternative because the shore crossings would likely be in similar locations and would both be on the west side of Oxnard; however, the exact location of the Clearwater Port onshore pipeline route is not known.

Center Road Pipeline Alternatives 1, 2, and 3 have impacts similar to the proposed Center Road Pipeline, with the following exception. Center Road Pipeline Alternatives 1 and 2 cross slightly fewer wetland features; therefore, they would have a smaller contribution than the proposed route to cumulative impacts on wetlands.

The Point Mugu Shore Crossing/Casper Road Pipeline route and the Arnold Road Shore Crossing/Arnold Road Pipeline alternative have impacts similar to the proposed Center Road Pipeline, with the following exception. In contrast to the proposed shore crossing in which all the HDB drilling equipment would be staged at the Ormond Beach Reliant Energy Generating Station, the HDB drilling equipment would be staged in areas immediately adjacent to suitable habitat for the saltmarsh bird's beak, a Federal and State endangered plant. These alternatives would likely to adversely affect saltmarsh bird's beak; therefore, these alternative's contribution to cumulative impacts on saltmarsh bird's beak would be greater than that of the proposed Center Road Pipeline.

Santa Clara Valley

Potentially significant cumulative impacts associated with residential and commercial development in the City of Santa Clarita would include a loss of riparian habitat; disturbance to species using the area; disturbance of approximately 1.3 miles (2.1 km) of designated and proposed critical habitat for the California Coastal Gnatcatcher; and effects on habitat for the unarmored three-spine stickleback, least Bell's vireo, arroyo toad, and western spadefoot toad. Known future development projects along the Santa Clara River and San Francisquito Creek would include mitigation measures to avoid or reduce impacts, but the residential and commercial projects would still result in a net loss of biological resources and habitat that could support sensitive species. The construction and installation of the proposed Project pipeline could add to the loss of habitat along the Santa Clara River and San Francisquito Creek.

Mitigation measures have been developed to reduce or minimize the loss of riparian habitat, including tree avoidance and replacement (MM TerrBio-2g), and riparian avoidance and restoration (MM TerrBio-2f). Other measures would ensure that construction avoids, minimizes, or reduces wetland impacts (MM TerrBio-3a) and avoids impacts on special status plants through pre-construction surveys (AM TerrBio-2a), a biological resources mitigation and monitoring plan (AM TerrBio-2b), an employee environmental education (AM TerrBio-2c), biological monitoring (AM TerrBio-2d), and confining activities to identified ROWs (AM TerrBio-2e). Lastly, construction activities could impact sensitive animal species. The previously cited employee environmental awareness and biological monitoring programs, along with pre-construction surveys (MM TerrBio-5a), would protect wildlife during construction.

Construction activities would contribute a relatively small and temporary cumulative impact.

If the Line 225 Loop Pipeline Alternative were implemented, impacts on special status species and wetlands would be similar to the proposed Line 225 Loop Pipeline route, suggesting that the use of this alternative would have a contribution to cumulative impacts on terrestrial biological resources similar to the proposed route.

It is not known what the contribution of the Clearwater Port project would be in Santa Clarita, but based on the Bisi testimony it is assumed that similar construction may be required in this system. (See Section 3.3.12.2 for a discussion of necessary expansions to the SoCalGas receiving facilities in Santa Clarita Valley.) The application for the Clearwater Port project that has been filed under the DWPA is currently under review by the agencies and has not been deemed complete, has not been confirmed by the agencies, and does not provide sufficient detail to allow evaluation of terrestrial biological resources in Santa Clarita. Therefore the lead agencies have determined that information from the application should not be relied upon or cited in the cumulative analysis of the Cabrillo Port Final EIS/EIR. However, to provide information for disclosure and comparison of this project under the CEQA, the cumulative analysis uses information on the Clearwater Port project that is available on the Clearwater Port public website, the California Energy Commission website, and other sources available to the general public.

GEOLOGIC RESOURCES

The Project is expected to temporarily increase sedimentation and erosion. After being disturbed, sediments would be deposited at or near their original location. Since these effects would be highly localized and limited primarily to the construction period, cumulative impacts on geologic resources would only occur if other projects were constructed at the same time and in the same location as the proposed Project facilities. If other terrestrial development/construction projects occur at the same time or near the same area, increased sedimentation could result. This cumulative impact would be minimized, however, by ensuring that the pipeline location and burial depth minimizes areas of sediment transport (AM GEO-6a). Consequently, potential cumulative impacts on geologic resources would be reduced to a level below the significance criteria (**CEQA Class II**).

No known project would occur simultaneously at the proposed Project or alternative shore crossing locations. However, the shore crossings for the Clearwater Port project and the Cabrillo Port Santa Barbara Channel Alternative would both occur at the Mandalay Beach Generating Station. The potential of worsening existing unfavorable geologic conditions and the potential effects due to the Project or its alternatives would be mitigated through the implementation of AM GEO-1a (drilling location), MM GEO-1b (backfilling, compaction, and grading), MM WAT-3a (drilling fluid release plan) and AM TerrBio-1a (erosion control) (**CEQA Class II**). It is assumed that Clearwater Port would implement similar mitigation measures to minimize any potential effects to geological resources. The cumulative effects of onshore and offshore alternatives would be similar

to the proposed Project, and the same mitigation measures would apply. However, the offshore pipeline component of the Cabrillo Port Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative would be located in the same pipeline corridor as the proposed Clearwater Port project offshore pipelines; therefore, construction of both simultaneously could contribute to adverse cumulative effects due to increased sedimentation in the same area.

The cumulative effects of major geologic events would be locational and event-specific. An earthquake, mass movement of soil, tsunami, or other geologic events could damage the FSRU, the offshore pipelines, or the onshore pipelines and facilities. The Applicant has sought to avoid active earthquake faults and other areas where geological events could occur and has incorporated engineering design features to limit the potential damage to the facilities (AM GEO-3b, and AM GEO-6a). Mitigation measures MM GEO-3c and MM GEO-3d would further reduce the potential for adverse effects.

Construction of the proposed Cabrillo Port Project or any of its alternatives could add to loss of fossil resources as a result of surface-disturbing activities associated with existing and reasonably foreseeable projects. However, if significant paleontological resources were identified at any time, construction would be diverted to avoid affecting these resources (**CEQA Class II**). Implementation of MM GEO-2a, inspection prior to excavation in areas with potential for paleontological resources, would minimize the potential impact to a level less than the significance criteria and therefore would not contribute to cumulative geological resources impacts. The type of construction necessary to install the Clearwater Port onshore pipeline could also add to loss of fossil resources in the region, as would most residential, commercial, and industrial projects where a foundation is dug or a subterranean parking structure is installed. It is assumed that most permitted construction activities would be required to implement similar mitigation measures as those proposed for the Cabrillo Port Project to ensure that potential impacts to fossil resources are reduced.

HAZARDOUS MATERIALS

During construction, the proposed Project or any of the alternatives could add to cumulative impacts in the region through potential releases of small quantities of fuels or hazardous materials, or through the potential unearthing contaminated sites in the offshore area. The area of the proposed Cabrillo Port or the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative is used by military, commercial, fishing, and recreational vessels, all of which can potentially release hazardous materials or small quantities of petroleum products. The proposed expansions at the Port of Los Angeles/Long Beach and the development of the Clearwater Port or the OceanWay project could increase maritime traffic in the region and thereby increase the potential for additional pollution. It is not possible to quantify the amount of increased pollution that would occur, but the contribution of either the proposed Cabrillo Port or the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative to the cumulative effect of hazardous materials impacts offshore would be small, given that laws and regulations concerning hazardous materials would be adhered to and that measures MM HAZ-2a, MM HAZ-2b,

and MM WAT-3a would minimize the potential of a release during construction and operations.

The net increase in vessel traffic would result in a greater potential for a spill, thus increasing potential cumulative hazardous materials impacts of the Project at either the proposed Cabrillo Port location or the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative location and other projects. If the Cabrillo Port Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative and the Clearwater Port project were both licensed and built, the density of vessel traffic in the Santa Barbara Channel and near the platforms would increase and thus would contribute to potentially greater cumulative hazardous materials impacts. The contribution from the proposed Cabrillo Port or the Cabrillo Port Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative, with the exception of potential spills of diesel fuel, would be mitigated to less than the significance criteria and all other releases would be regulated under international, Federal, and State laws and regulations.

Construction activities from any of the proposed onshore projects could unearth contaminated soils; however, it would be speculative to assume that the proposed Project or its onshore alternatives and another onshore project would simultaneously uncover contaminated soils. Because the Clearwater Port onshore pipeline route is very preliminary, it is neither necessary nor possible with any degree of certainty to determine whether it would cross any areas of contaminated soils. The Whittaker-Bermite facility is a contaminated facility immediately adjacent to Line 225 Loop and Line 225 Loop Alternative; however, according to the California Department of Toxic Substances, no contamination is present along that border of the facility. Implementation of MM HAZ-3a and MM HAZ-3b would reduce the contribution of the Project or its alternatives to cumulative effects to less than the significance criteria for hazardous materials.

No known offshore projects would be constructed concurrently with the proposed Project; therefore, only the proposed Project would contribute to potential disturbance of any offshore contaminated sediment or exposure of unexploded ordnance on Point Mugu Sea Range. However, no known contaminated sediments occur within 1 NM of the offshore pipeline route for the proposed Cabrillo Port Project or the Santa Barbara Channel Alternative, and the Project would implement MM HAZ-4a and MM HAZ-4b to reduce the potential contribution of the Project to cumulative effects to negligible.

LAND USE

Onshore

The onshore proposed pipeline route and alternatives would be installed primarily through existing easements or in existing ROWs, and therefore little conversion of existing land uses would be required. The one exception is the expansion of the Center Road Valve Station, where approximately 0.1 acre (0.04 ha) of an existing orchard would be acquired and used in the expansion (**CEQA Class II**) for the proposed Project

and all the Center Road Pipeline route alternatives and the Gonzales Road Pipeline Alternative. Although the onshore pipeline for the Clearwater Port project is preliminary, it also would likely be installed in existing easements or ROWs would require the conversion of a similar amount of land. The Arnold Road and Point Mugu Shore Crossings would result in the conversion of 0.9 acres (0.4 ha). While other projects in the proposed Project area may contribute to the loss or conversion of agricultural lands, with mitigation (AM AGR-1a), the incremental, cumulative contribution of the proposed Project to changes in land use or that of its onshore alternatives would reduce this impact to below its significance criteria. No agricultural lands would be converted to non-agricultural uses with the installation of Line 225 Loop or its alternative. Therefore, the resulting cumulative impact on land use for the Cabrillo Port Project and its alternatives is considered negligible.

A Notice of Preparation for an EIR for the Ormond Beach Specific Plan was issued in 2005. To date, the development of the Plan and EIR are underway, but neither has been published. The installation of the proposed pipeline route, any Center Road Pipeline route alternatives, or the shore crossing alternatives could affect where a school could be sited within the development. However, the specific impact could not be determined until the local school districts conducted a pipeline risk analysis. Construction-related impacts such as noise, dust, and parking and access are addressed under those respective sections.

NOISE

Offshore

The Project would add to cumulative noise impacts in the area (see Section 4.20.3.7 for a discussion of cumulative impacts from noise on marine mammals). Aerial and marine operations at the Point Mugu Sea Range are ongoing and could intermittently increase noise in the vicinity of the proposed Project. Construction noise from the installation of the FSRU at either the Cabrillo Port proposed location or the Santa Barbara Channel Alternative would be temporary, but the FSRU's operational noise at either the proposed Cabrillo Port location or the Santa Barbara Channel Alternative location would be continuous. Cumulative noises effects could occur when offshore pipeline construction is occurring in and near the vicinity of the Sea Range; however, implementation of MM NOI-1a (efficient equipment usage), AM MT-1a (safety vessel warnings), and MM MT-1c (notices to mariners) would mitigate the noise levels and exposure to boaters to below the impact's level of significance (**CEQA Class II**) for boaters. Operational noise from the FSRU at either the proposed or alternative location would exceed significance levels into the ATBA (**CEQA Class I**), however not beyond this area, and would diminish further with greater distance. Since the Point Mugu Sea Range is 3.54 NM (4.1 miles or 6.6 km) from the FSRU at the proposed location and further from the Cabrillo Port Santa Barbara Channel Alternative location, cumulative effects of operational noise and marine operations on the Sea Range are unlikely. Aerial operations on the Sea Range could have cumulative noise effects for boaters transiting the ATBA (**CEQA Class I**), but the cumulative effect would be less than significant given the transitory nature of aerial operations.

The existing operation of the 43 oil and gas platforms is taken into account in the existing noise baseline conditions. No additional oil and gas platforms are planned in the Santa Barbara Channel. Development of the non-producing oil and gas leases is uncertain due to ongoing litigation and there is a moratorium on new offshore leasing. Current and new activities on these leases would increase noise, but the noise generated from Cabrillo Port would be sufficiently distant from these activities such that no cumulative noise effects are anticipated. If the Clearwater Port project is licensed, noise would increase in areas with common vessel traffic, including parts of the vessel traffic lanes and vessels exiting and entering Port Hueneme. No vessel traffic would be anticipated from the OceanWay project to the Port of Hueneme.

Noise increase would be substantial, but temporary if the offshore LNG projects were constructed concurrently, but the contribution of the Project would be mitigated through the use of MM NOI-1a, AM MT-1a, and MM MT-1c. If the projects were to operate simultaneously, noise would increase at each respective location and would contribute to cumulative noise impacts at these locations; however, the OceanWay and Clearwater Port would be located 14.66 NM (16.9 mi., 27.2 km) and 28.9 NM (33.3 miles or 53.5 km, respectively, from Cabrillo Port. Therefore, assuming that the proposed OceanWay and Clearwater Port would generate a similar amount of noise as Cabrillo Port, operational noises from the projects would not have geographically overlapping effects. LNG carrier traffic would increase, but carriers would have to adhere to USCG and International Maritime regulations and would keep their distance from other large vessels; therefore, there is unlikely to be a cumulative effect on noise.

The Cabrillo Port Santa Barbara Channel FSRU Alternative would be 5.01 NM (5.77 mi., 9.28 km) away from Platform Grace, the proposed location for the Clearwater Port project. Vessel traffic is greater in this area; therefore, if these projects were constructed simultaneously, more boaters could hear noise generated during construction and operation. Like the proposed Project, construction noise would be temporary and recreational boaters could avoid the construction zone. All mitigation measures applicable to offshore operations (see Section 4.14.5.2) would be applicable to this alternative; however, like the proposed Project, noise generated on the FSRU during operations would have a significant impact on recreational boaters within 0.6 mile (1 km), which could not be mitigated. Therefore, the use of this alternative would result in a similar contribution to cumulative impacts from noise as compared with the proposed action. Assuming that both the Cabrillo Port Santa Barbara Channel FSRU Alternative and the Clearwater Port projects would generate similar levels of operational noise, given the distance between the two locations, it is unlikely that the areas of significant noise impacts generated by would overlap.

Expansion of the Port of Los Angeles/Long Beach would likely result in an increase in vessel traffic in the Santa Barbara Channel. With the increase in vessel traffic, there would be a concurrent increase in vessel noise. The cumulative noise effects of this increase in vessel traffic and the presence of the Project at proposed Project location would be in the ATBA, the location where boaters could transit between the FSRU and the Santa Barbara Channel TSS. There would be locations in the ATBA where noise levels exceed significance levels from FSRU operations. If a boater were transiting the

ATBA when a vessel was transiting the Santa Barbara Channel TSS in the vicinity of the FSRU, the boater would experience significant cumulative noise effects (**CEQA Class I**). These effects would be transitory because both the vessel and the boater would be in transit. Project support vessels would transit a portion of the Santa Barbara Channel TSS traveling to and from Port Hueneme. These vessels would cause temporary but significant noise impacts (**CEQA Class I**). There could be cumulative noise impacts from the increased vessel traffic in the Santa Barbara Channel TSS if vessels travel in close proximity to one another; however, this is unlikely because vessels must maintain a safe distance from one another.

Like the proposed Project location, the noise generated by an FSRU located at the Cabrillo Port Santa Barbara Channel Alternative would result in noise above the significance criteria for boaters transiting the ATBA (**CEQA Class I**). Since this area experiences greater boating traffic than the proposed Project location, the cumulative noise impacts at this location would likely be greater than at the proposed Project location.

Onshore

The proposed Project would contribute incrementally to cumulative impacts from noise impacts in the area if road, residential housing, or commercial development construction projects were to occur concurrently in the vicinity of the pipeline construction for the proposed Project or alternative onshore pipeline routes. Despite the implementation of mitigation measures MM NOI-4b, MM NOI-4c, MM NOI-4d, MM NOI-4e, MM NOI-4f, MM NOI-5a, MM NOI-6a and MM NOI-6b, temporary construction noise would result in a **CEQA Class I** impact because noise impacts would remain significant, but temporary.

The proposed Project pipeline routes and the alternative pipeline routes would all generate vibration during pipeline installation that would result in **CEQA Class I** impacts because the impacts could not be completely mitigable. Vibration generated at the proposed shore crossing and at the alternative shore crossing would not exceed the significance criteria. Therefore, construction of any other onshore project within the immediate vicinity of any of the pipeline routes would contribute further to a **CEQA Class I** vibration impact.

Comparable levels of noise and vibration are anticipated from the installation of the onshore Clearwater Port Pipeline route. The proposed Cabrillo Port Pipeline route and its Center Road alternatives would be of sufficient distance from the preliminary Clearwater Port onshore pipeline route that even if both projects were constructed simultaneously, they would not have overlapping noise or vibration impacts, except near the Center Road Valve Station where they might converge. In addition, the Cabrillo Port Gonzales Road onshore pipeline alternative could be sufficiently close to the preliminary Clearwater Port onshore pipeline route that there could be overlapping noise and vibration impacts.

The proposed Project shore crossing would result in **CEQA Class I** noise impacts, based on exceedances of local noise ordinances in City of Oxnard. In contrast, the

Arnold Road Shore Crossing/Arnold Road Pipeline and Point Mugu Shore Crossing/Casper Road Pipeline Alternatives are located in Ventura County, which has different noise ordinances. Through implementation of AM NOI-4a, and MM NOI-4b through MM NOI-4f, MM NOI-5a, MM NOI-6a, and MM NOI-6b during construction and maintenance operations at these locations, noise levels could be reduced below local noise ordinance levels required at the closest residence (**CEQA Class II**). In addition, noise levels at the closest residence to the Mandalay shore crossing meet the City of Oxnard noise ordinance levels (**CEQA Class II**). Therefore, the shore crossing alternatives would result in a smaller contribution to cumulative noise impacts to sensitive receptors in comparison with the proposed shore crossing and pipeline route. Given that the Cabrillo Port Santa Barbara Channel Alternative and Clearwater Port shore crossing both would occur at the Reliant Energy Mandalay Generating Station, if both were to be installed simultaneously, noise levels could exceed City of Oxnard noise ordinance levels (**CEQA Class I**).

RECREATION

Offshore

Impacts on offshore recreation can result from restricted access or changes to the aesthetic quality of the area.

The presence of large permanent structures or LNG carriers may reduce the quality of the recreational experience for some individuals. In addition to the FSRU that would be constructed for the Cabrillo Port Project, existing and future projects with permanent or large offshore facilities include the Clearwater Port, OceanWay, existing future offshore oil platforms, and naval activities at the Point Mugu Sea Range.

The presence of the FSRU in conjunction with permanent changes to Platform Grace from the Clearwater Port and the OceanWay project is considered a significant cumulative impact for which no mitigation exists (**CEQA Class I**). If the Cabrillo Port Santa Barbara Channel Alternative were implemented, it would have similar cumulative impacts.

TRANSPORTATION

The Project is not expected to add significantly to the cumulative impact on transportation. No public roads would be permanently eliminated or created by Project activities. Ventura County has plans to expand roads on portions of Hueneme Road, Pleasant Valley Road, Rice Avenue, and Santa Clara Avenue by 2010. If these activities occurred simultaneously with the installation of the Project pipeline, short-term cumulative impacts on traffic could occur (**CEQA Class II**). These impacts could include traffic slowdowns and/or detours that could last several days. Mitigation measures TRANS-1a and TRANS-1b would reduce this impact to below its significance criteria, and other projects would likely have similar mitigation measures.

Road maintenance activities in the Project area could include repaving, clearing road shoulders, and similar activities. If these activities were to occur at the same time and

place as the Project, short-term cumulative impacts on traffic could occur (**CEQA Class II**). These impacts would be limited to temporary disruptions such as slower traffic or detours lasting several days at a time. MM TRANS-4a, MM TRANS-4b, and MM TRANS-5a, as well as BMPs that would likely be used for the possible maintenance projects occurring concurrently, would reduce or eliminate any significant impacts.

If any of the proposed construction projects for Oxnard or Santa Clarita were to occur simultaneously with the proposed Project, a net increase in traffic in each respective area would result from workers and equipment going to and from the construction sites. These are temporary impacts that would cease at the end of construction.

The Project would reduce its contribution to local traffic by implementing traffic control plans (MM TRANS-1a) and implementing notifications, schedule shifts and carpooling BMPs (MM TRANS-1b). These mitigation measures would reduce the impacts, but they could not be fully avoided. Therefore, if other local projects with similar impacts were to occur simultaneously, temporary cumulative impacts on the overall traffic conditions could occur (**CEQA Class II**). The cumulative contribution to traffic impacts from the Gonzales Road Pipeline Alternative and Center Road Pipeline Alternative 1 would be greater than the proposed Project in the Oxnard area because both pass through residential areas. Center Road Pipeline Alternatives 2 and 3 would have a similar contribution to cumulative traffic impacts as the proposed Project because these routes largely pass through agricultural areas.

Also, the contribution to degradation of roads from the Project would be mitigated through MM TRANS-5a, which requires the Applicant or its designated representative to repair roads to their pre-construction condition (**CEQA Class II**); NEPA minor adverse, short-term). Therefore, the Project would not contribute to cumulative impacts on roads.

In Santa Clarita, construction of the Line 225 Pipeline Loop route would require closure or rerouting of the South Fork Trailhead bike path for about 10 to 14 days (**CEQA Class II**). If construction of multiple projects were to occur concurrently in Santa Clarita, multiple bike paths could close or be rerouted temporarily. However, these closures would be temporary and rerouting of the paths during the short construction period is often possible. Therefore, this project would not contribute to cumulative impacts on bike trails. Line 225 Loop Alternative would have similar cumulative impacts to the Line 225 Pipeline Loop.

Potential cumulative impacts from the proposed Clearwater Port project have not been included in this analysis because the application for the Clearwater Port project that has been filed under the DWPA is currently under review by the agencies and has not been deemed complete, has not been confirmed by the agencies, and does not provide sufficient detail to allow evaluation of onshore transportation impacts. Therefore the lead agencies have determined that information from the application should not be relied upon or cited in the cumulative analysis of the Cabrillo Port Final EIS/EIR. However, to provide information for disclosure and comparison of this project under the CEQA, the cumulative analysis uses information on the Clearwater Port project that is

available on the Clearwater Port public website, the California Energy Commission website, and other sources available to the general public.

WATER QUALITY AND SEDIMENTS

Onshore

The shore crossings for the Clearwater Port and the Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative offshore pipelines are both proposed to be located at the Reliant Energy Mandalay Generating Station. It is assumed that the Clearwater Port shore crossing would be conducted in a similar manner as the one proposed for the Cabrillo Port Project; therefore, potential adverse impacts would be minimized. However, if construction were to occur simultaneously, there could be a cumulative adverse impact.

The cumulative effects on onshore water resources as a result of construction at stream crossings for the proposed Center Road Pipeline and its alternatives could be adverse but could be mitigated through the implementation of MM WAT-3a, MM WAT-4a through MM WAT-4c, and MM GEO-1b to reduce the impact to a level that is less than the significance criteria (**CEQA Class II**). Based on permits and existing studies for the identified projects and the locations and types of water resources in the onshore Project area, the proposed Project and the Center Road Pipeline alternatives would not contribute to any further degradation of surface water quality, primarily because activities that would result in temporary or short-term discharges to surface water would require adherence to permit conditions and BMPs that aim to reduce or avoid such impacts. Therefore, this Project and the Center Road Pipeline alternatives would not contribute significantly to changes to local water quality and sediment.

If Line 225 Loop alternative were implemented, the Santa Clara River would be crossed using either an existing bridge or HDD. The potential cumulative water quality impacts of construction of any of the projects in the vicinity of the Santa Clara and installation of the Project pipeline in the pipeline bridge would be less than those if HDD were used for this alternative. Impacts from HDD would be similar to those of the proposed Project and are addressed under Impact WAT-4. Implementation of mitigation WAT-3a, WAT-4a, WAT-4c would reduce this alternative's impact to less than significant, so the cumulative contribution of this alternative to water quality would be negligible.

The location or method of onshore water crossings for the Clearwater Port are not known; therefore, the potential cumulative effects are uncertain. However, it is assumed that similar mitigation measures and permits would be required to ensure that potential impacts to water resources would be minimized.

ACRONYMS

AIS	Automatic Identification System
AM	Applicant-proposed measure
ATBA	area to be avoided
BHPB	BHP Billiton LNG International Inc.
BMPs	best management practices
CARB	California Air Resources Board
CCC	California Coastal Commission
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CINMS	Channel Islands National Marine Sanctuary
CO	carbon monoxide
CPUC	California Public Utilities Commission
CSLC	California State Lands Commission
DMP/DEIS	Draft Management Plan/Draft EIS
DTSC	Department of Toxic Substances Control
DWP	Deepwater Port
DWPA	Deepwater Port Act
EEAP	Employee Environmental Awareness Program
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIS	Environmental impact Statement
EBRV	Energy Bridge™ Regasification Vessel
FERC	Federal Energy Regulatory Commission
FSRU	floating storage and regasification unit
GREAT	Ground Water Recharge Enhancement and Treatment Program
ha	hectares
HAZOP	hazard and operability study
HCA	high consequence area
HDB	horizontal directional boring
HDD	horizontal directional drilling
IOU	investor-owned utilities
IRA	Independent Risk Assessment

JOFLO	Joint Oil/Fisheries Committee of South/Central California
km	kilometers
LNG	liquefied natural gas
m	meters
m^2	square meters
MARAD	U.S. Maritime Administration
MMcf	million cubic feet
MMS	U.S. Department of the Interior, Minerals Management Service
MP	milepost
MW	megawatts
NBVC	Naval Base Ventura County
NEPA	National Environmental Protection Act
NM	nautical miles
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
OCS	Outer Continental Shelf
PG&E	Pacific Gas & Electric Company
PLEM	pipeline-ending manifold
ppm	Parts per million
QRA	quantitative risk analysis
ROC	reactive organic compound
ROW	right-of-way
SCE	Southern California Edison
SCV	submerged combustion vaporizer
SES	Sound Energy Solutions
SHOBA	shore bombardment range
SOAR	Southern California Anti-submarine warfare Range
SOCAL	Southern California Operations Area
SoCalGas	Southern California Gas Company
SWTR	shallow water training range
TSS	Traffic Separation Scheme
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency

UXO	unexploded ordnance
VAFB	Vandenberg Air Force Base
VHF	very high frequency
VTS	Vessel Traffic Service

Exhibit G: Statement of Overriding Considerations

EXHIBIT G: STATEMENT OF OVERRIDING CONSIDERATIONS

1.1 INTRODUCTION TO STATEMENT OF OVERRIDING CONSIDERATIONS

The California Environmental Quality Act (CEQA) requires a lead agency to balance the benefits of a project against the unavoidable environmental effects of such project in determining whether to approve the project. Since the Final EIR identifies significant impacts of the Cabrillo Port LNG Deepwater Port (the Project) that cannot feasibly be mitigated to below a level of significance, Class I impacts, the California State Lands Commission (CSLC), as the lead agency, must state in writing its specific reasons for approving the Project in a "Statement of Overriding Considerations" pursuant to sections 15043 and 15093 of the State CEQA Guidelines.

Based on the Final EIR, and other information provided by BHP Billiton LNG International Inc. (BHPB, or the Applicant) and gained through the public involvement process which is recorded in the administrative record, this Statement of Overriding Considerations provides the specific reasons supporting the approval of this Project by the lead agency. State CEQA Guidelines section 15093(a) notes that, "If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable'."

This Statement of Overriding Considerations presents the beneficial impacts derived from the Project, reasons for approving the Project, and a list of the specific significant effects on the environment attributable to the Project that cannot feasibly be mitigated to below a level of significance.

1.2 ADOPTION OF STATEMENT OF OVERRIDING CONSIDERATIONS BY THE LEAD AGENCIES

The CLSC has balanced the benefits of this project against significant unavoidable impacts that would remain after mitigation is applied and adopt this Statement of Overriding Considerations.

As noted in Chapter 5, the effects in all resource areas were evaluated to determine any significant or unavoidable impacts. In general, most adverse impacts associated with the proposed Project are anticipated to be short-term and/or localized, or would be reduced to below their significance criteria by implementation of feasible mitigation measures. Impacts and mitigation measures are identified and discussed throughout Chapter 4 of the Final EIR in their respective sections. A summary of all impacts and mitigation is provided in Table 6.1-1 in Chapter 6 of the Final EIR, "Conclusions and Recommendations."

1.3 ENVIRONMENTAL EFFECTS OF THE PROJECT THAT CANNOT BE MITIGATED TO LESS THAN SIGNIFICANT

Although the Applicant has revised the proposed Project in several ways since the issuance of the March 2006 Revised Draft EIR in response to agency and public comments (Project changes are presented in Chapter 1), twenty significant Project impacts that cannot be mitigated to below their significance criteria remain.

The Final EIR found that although the likelihood of an accident is very low, there are unavoidable public safety impacts including the potential for accidental release of LNG (unignited flammable vapor) offshore at the DWP or of natural gas (potentially flammable) from the onshore facilities that could result in irreversible damage either offshore or onshore.

Class I Air Impacts include exceeding emissions thresholds in Ventura and Los Angeles Counties during construction, the potential for exceeding air quality standards in the case of an accident, and the potential for LNG carriers and support vessels to contribute to ambient ozone impacts in the areas located downwind of the Project.

Marine mammals could be adversely affected by noise, and there is a possibility that individual marine and terrestrial mammals, such as sea turtles, birds, and fish could be injured or killed. An irreversible or irretrievable effect on the overall species baseline populations is, however considered unlikely.

In addition, Class I agriculture, aesthetics, noise, recreation, and water quality impacts were identified.

All Class I impacts, as defined under the CEQA, are listed below within the following categories: 1) Temporary – returns to baseline conditions after the activity stops; 2) Short-term – returns to baseline conditions on its own within one year of the activity; 3) Long-term – returns to baseline conditions after restoration and monitoring; and 4) Permanent – never returns to baseline conditions.

Temporary impacts include the following six impacts:

- **Impact AIR-1.** Project construction activities in Ventura and Los Angeles Counties would generate emissions that exceed quantitative thresholds for criteria pollutants in designated air quality nonattainment areas.
- **Impact AIR-2.** Onshore Project construction activities would generate particulate emissions that could cause or contribute to existing or projected violations of ambient air quality standards.
- **Impact AIR-3.** An LNG spill from the FSRU or a pipeline rupture would result in a natural gas release and/or a fire that could cause temporary increases in ambient air concentrations of criteria pollutants in excess of air quality standards, expose sensitive receptors and the general public to substantial concentrations of toxic air contaminants, and/or create objectionable odors.

- **Impact NOI-4.** HDB at the shore crossing and HDD or other drilling techniques at onshore waterways and intersection crossings could temporarily increase noise levels for sensitive receptors. Noise levels could exceed local noise ordinances or permit conditions
- **Impact NOI-5.** HDB, HDD, boring, trenching, and other construction activities could temporarily create vibration levels at sensitive receptors
- **Impact NOI-6.** Site preparation, pipeline installation, and construction of aboveground facilities could temporarily increase noise levels for sensitive receptors, such as schools and residences. Noise levels may exceed county and/or city noise ordinances or permit conditions during the installation of the onshore pipeline and associated structures.

Short term impacts include the following impact:

- **Impact WAT-5b:** An accidental release of diesel fuel to marine waters violates Federal and State water quality standards or objectives.

Long term impacts include the following six impacts:

- **Impact BioMar-6.** An accidental release of a natural gas, fuel, or oil could cause morbidity or mortality of marine biota, including fish, invertebrates, seabirds, and special status species such as sea turtles, through direct contact or ingestion of the material.
- **Impact BioMar-8.** A release of LNG, natural gas, fuel, or oil could cause injury or mortality of marine mammals through direct contact or ingestion of the material.
- **Impact PS-2.** A high-energy collision of another vessel with the FSRU or an LNG carrier or an intentional attack could cause a rupture of the Moss tank(s) holding LNG, leading to a release of an unignited flammable vapor cloud that could extend beyond the 1,640-foot (500 m) radius safety zone around the FSRU, impact any members of the boating public in the identified potential impact area, and impact boats traveling in the Traffic Separation Scheme.
- **Impact PS-3.** Fishing gear could become hung up on the pipeline and potentially damage one or both of the subsea pipelines. Similar damage may occur due to a seismic event or subsea landslide.
- **Impact PS-4.** The potential exists for accidental or intentional damage to the onshore pipelines or valves carrying odorized natural gas. Damage, fires, and explosions may occur due to human error, equipment failure, natural phenomena (earthquake, landslide, etc.). This would result in the release of an odorized natural gas cloud at concentrations that are likely to be in the flammable range.
- **Impact PS-5.** In the event of an accident, there is a greater likelihood of injury, fatality, and property damage near Center Road Pipeline MP 4.1, an HCA.

Permanent impacts include the following seven impacts:

- **Impact AES-3.** The FSRU would change the visual character of the ocean view for recreational boaters.
- **Impact AGR-2.** Expansion of the Center Road Valve Station in Ventura County would require conversion of approximately 0.1 acre (0.04 ha) of agricultural land to non-agricultural uses.
- **Impact AIR-5.** Emissions of NOx and ROC generated from LNG carriers, tugboats, and the crew/supply vessel operating in California Coastal Waters could contribute to ambient ozone impacts in the areas located downwind of the Project.
- **Impact BioMar-5.** Noise from construction and operation vessels or equipment could disrupt migrations; interfere with or mask communications, prey and predator detection, and/or navigation; cause adverse behavioral changes; or result in temporary or permanent hearing loss.
- **Impact NOI-2.** Recreational boaters and fishers at certain distances from the facility could hear noise generated by FSRU operations over the long-term.
- **Impact NOI-3.** LNG carriers, crew boats and supply vessels, or helicopters could temporarily increase noise levels for sensitive receptors, such as recreational boaters and fishers.
- **Impact REC-3.** The presence of the Project would alter the recreational experience of recreational boaters, including tourists and visitors on whale-watching trips and other visitors to the Channel Islands National Park.

1.4 BENEFICIAL IMPACTS OF THE PROJECT THAT MEET PROJECT OBJECTIVES (CLASS IV).

The State CEQA Guidlines at section 15093 indicates that beneficial impacts of the project may be noted in the Statement of Overriding Considerations.

The overall Project purpose, need, and objectives are to increase the natural gas supply in California, and to increase natural gas supply reliability and diversity. Each of these benefits is discussed in 1.4.1 and 1.4.2 below.

Additional benefits to air quality and the regional economy are discussed in 1.4.3 and 1.4.4 through 1.4.5, respectively.

1.4.1 Improving the Reliability and Diversity of California's Natural Gas Supply

The California Energy Commission (CEC) estimates that California's demand for all uses of natural gas will grow by approximately 0.7 percent annually from 2006 to 2016, even after taking into account maximum increased conservation and the use of renewable energy. According to the CEC's 2005 Natural Gas Assessment Update, California's total annual consumption of natural gas was 2,200 billion cubic feet in 2003; by 2013, natural gas demand in the State is projected to reach 2,400 billion cubic feet,

in part as a result of the growing use of natural gas for electricity generation. The CEC has thus recommended that California secure and diversify its sources of natural gas to ensure a sufficient and reliable supply of natural gas.

With respect to natural gas, the 2005 Integrated Energy Policy Report states:

> California clearly needs to increase the diversity of its natural gas supply portfolio. Being at the end of a long interstate pipeline network, California must also have access to a variety of sources. LNG is one such potentially cost-competitive and reliable source. . . . LNG simultaneously presents natural gas supply opportunities, additional infrastructure capacity into the West Coast, and coastal industrial development challenges. In considering LNG projects currently proposed for California, the state must address safety, environmental, and gas quality issues associated with these projects in an efficient and equitable manner (CEC 2005b).

The 2005 Natural Gas Assessment Update states:

> The State should also pursue strategies to generate 33 percent of its electricity from renewable energy. Even with these aggressive actions, however, the statewide demand for natural gas will continue to grow by at least one percent per year requiring additional natural gas imports into the State.

The State of California's Energy Action Plan II: Implementation Road Map for Energy Policies encourages the development of additional in-state natural gas storage to enhance reliability and mitigate price volatility. The CPUC recently reaffirmed that both the State's Integrated Energy Policy Report and Energy Action Plan recognize the need for additional natural gas supplies from LNG terminals on the West Coast:

> "However, even with strong demand reduction efforts and our goal of 20% renewables for electric generation by 2010, demand for natural gas in California is expected to roughly remain the same, rather than decrease, over the next 10 years. This is because, a substantial portion of the other 80% of electric generation (not met by renewable energy sources) will need natural gas as its fuel source, and natural gas will still be needed for the growing number of residential and business customers of the natural gas utilities." (Peevey 2006)

The corresponding benefits of the Project are that it will accomplish this goal of increasing the reliability and the diversity of the supply of natural gas for domestic consumption for the lifetime of the Project (maximum 40 years).

1.4.2 Controlling Natural Gas Costs in California

Fuel costs are one of the underpinnings of the California economy. One way to reduce the cost of fuel is to ensure competition among fuel sources:

> "Rising natural gas prices directly affect California's economy and consumers. High gas prices increase consumers' cost of living and reduce their purchasing power for other goods and services. Californians feel the effects of rising natural

> gas prices with more expensive home heating and electricity bills, and higher prices for food and consumer goods. According to a 2004 Mortgage Bankers Association Economic Commentary, "High energy prices act as a tax on consumers...that ...tend[s] to slow consumer spending..."
>
> "California relies upon imports to meet 85 percent of its demand for natural gas. In the future, California will face growing competition from other Western States and the Midwest for natural gas supplies and interstate pipeline capacity. To compete successfully against other states, California consumers will be expected to pay higher natural gas prices and pipeline transportation rates.
>
> Today's high natural gas prices reflect declining supplies, increased competition from other states to satisfy the regional natural gas demand, and the dominance of the U.S. natural gas market upon California prices. In the future, natural gas prices can be expected to continue increasing unless demand is lowered or imports increase to boost available supplies." (CEC 2005b)

The Cabrillo Port Project will provide an increase in natural gas imports to the state and thereby ensure competition and help keep the price of natural gas affordable for Californians.

1.4.3 Benefits to Achieving Statewide Air Quality Goals

In response to consultations initiated during the environmental process, the Air Resources Board, in a memorandum dated October 4, 2005, stated,

"The Air Resources Board (ARB) staff support efforts to secure natural gas supplies to meet California's current and future natural gas demands. Natural gas is a clean air strategy that has significantly contributed to the air quality improvements California has achieved. We believe that natural gas needs to continue to be a clean air strategy in order for California to meet our air quality goals."

The analysis of Air Quality in Section 4.6 of the Final EIR, specifically Impact AIR-5 , concludes that the proposed Project would create a net increase in NO_x emissions from marine vessel traffic The proposed Project would also create a net increase in ROC emissions from marine vessel traffic. These net increases in offshore ozone precursor emissions have the possibility of contributing to ambient ozone impacts on shore within Ventura County and Los Angeles County, both of which are designated as nonattainment areas for ozone. The emissions of ozone precursors from project marine vessels represent a significant and unavoidable impact (Class I).

With due consideration of the above described analysis, the augmentation and diversification of California's supplies of natural gas as discussed in Section 1.4.1, would, on balance, facilitate and continue California's progress toward meeting its statewide air quality goals.

1.4.4 Beneficial Impacts from Project Construction on Tax Revenue

Project Construction would result in a beneficial impact on local tax revenue.

The Project is expected to have a substantial but temporary direct economic impact of pumping $83 million into the regional economy. This impact does not include additional economic impacts from multiplier effects. To the extent that specialized LNG civil works and equipment are imported from outside the region, the multiplier effect would be reduced. The FSRU would be constructed in either Finland or the Far East, where shipyards have the capacity to construct the specialized vessel.

The largest direct expenditures, estimated to be $50 million over the 8-month construction period, would come from locally procured supplies, equipment, materials, and services. In addition, terminal services would be procured locally to support the FSRU and pipeline construction ($31.9 million.). These expenditure categories would comprise 98 percent of the total construction period expenditures.

Approximately $1 million in construction payroll would enter the regional economy by increasing the disposable incomes of workers, households, and businesses directly or indirectly affected by the Project.

In addition to the direct economic impacts a range of indirect and total economic impacts would be generated by the initial direct construction expenditures. Since the size of the gross multiplier that should be applied is uncertain, a range of total potential economic impacts is presented.

During construction, the indirect economic impacts or temporary benefits to the regional economy would range between $42 million and $125 million, depending on multiplier effects. Direct expenditures can potentially generate between $125 and $208 million in total non-recurrent economic impacts over the 8-month construction period. While temporary, these economic benefits from the Project are substantial.

Expected tax revenues generated during construction represent one-time benefits to state and local governments. Tax revenues would be generated from the taxes on goods, services, and materials and supplies purchased locally. In addition, the State of California would receive state payroll taxes. The impacts from these construction-phase tax revenues are temporary and moderate in size.

The State of California could expect to receive a one-time tax benefit of approximately $3.2 million during construction. The majority of this fiscal benefit would originate in the estimated $50 million in spending on locally procured materials and supplies. In addition, State payroll taxes derived from the construction period payroll and sales taxes on goods and services purchased locally by workers would generate tax revenues. While substantial in size, the construction period tax revenues are a one-time event.

1.4.5 Beneficial Impacts from Project Operation on Tax Revenue

Project operations would result in a beneficial impact on local tax revenue.

During operations, the Project would generate an annual direct economic benefit of $13.3 million for the regional economy. This direct economic impact does not include any multiplier effect (indirect impacts). The annual direct economic impact is moderate in size and long-term in nature and would last for the Project's duration.

Salaries represent the largest share of the annual direct expenditures. It is estimated that annual regional spending on goods and services by the 30 (off-FSRU shift) workers would total $1.3 million per year. This spending estimate is based on 30 percent of $ 4.2 million per year in annual direct wages (out of total labor costs of $5.7 million) that would be spent on housing, food, and onshore entertainment between shifts.

Supplies purchased locally to sustain operations ($2.3 million/year) represent 17 percent of direct annual expenditures. Expenditures for marine terminal services ($2.2 million/year) represent tugboat operations (standby tugboat and crew, $1.9 million) and loading masters ($0.3 million/year).

During facility operations indirect economic impacts or annual recurrent benefits to the regional economy would be between $6.7 million and $20 million, depending on multiplier effects. Direct expenditures would generate between $20 and $33.6 million in total recurrent economic impacts over the life of the facility, depending on multiplier effects. These annual recurrent economic benefits from Project operations are long-term but moderate in size.

Annual tax revenues would accrue to state and local governments on a recurrent basis. Estimated annual tax revenues from the Project could defray some of the costs/expenditures arising from Project operations.

Workers would spend part of their wages on local goods and services. The State of California could receive $171,696 annually from payroll taxes. These tax revenues were estimated at 4.0 percent of the total annual payroll of $4,292,400. The 4 percent includes state withholding and California disability withholding.

At the state and local level, the estimated tax revenues would not significantly alter public revenues. Operating period tax revenues are relatively small compared to other tax revenue sources.

The Applicant has also pledged additional community assistance to each community in which it has a presence. In a letter to the Applicant's stakeholders, the company's Chief Executive Officer, Chip Goodyear, stated that: "One of our key community performance measures is our commitment to spend 1 percent of our pre-tax profits (on a 3-year rolling average) on community programs. I am pleased to report that, in the 2 years since we made this commitment, we have exceeded this target."

1.5 OVERRIDING CONSIDERATIONS CONCLUSION

The CSLC finds that the beneficial, additional source of natural gas to be provided by the Cabrillo Port LNG Deepwater Port Project, the diversification of the State's gas supply, the benefit to California meeting its air quality goals, and the related stability

benefits to the California economy, as well as the temporary and longer-term tax revenue benefits of this Project, outweigh the unavoidable adverse environmental effects discussed above. The CSLC therefore finds that in light of these benefits, the adverse environmental effects of the Project are acceptable.

EXHIBIT H

State of California **Public Utilities Commission**
San Francisco

M E M O R A N D U M

Date : December 12, 2006

To : President Peevey

From : Richard A. Myers, Energy Division
Harvey Y. Morris, Legal Division

Subject : California's Need for LNG Supplies

As you requested, this memorandum provides a summary of why California needs liquefied natural gas (LNG) supplies in its future and why LNG terminals should not be sited onshore in or near densely populated areas.

I. LNG Supplies Should Be a Component of California's Natural Gas Portfolio

On average, California requires a little more than 6000 million cubic feet per day (MMcfd) of natural gas and obtains about 85-90% of its natural gas supplies from outside of California. These out-of-state supplies are delivered by interstate pipelines from natural gas producing basins in the southwestern and Rocky Mountain regions of the U.S. and in western Canada. Only the remaining 10-15% is obtained from California production, which production has been overall declining.

It is prudent for California to have access to a diverse portfolio of natural gas supplies to assure adequacy of supplies to the State and to have ample access to the lowest cost supplies of natural gas as market conditions change. The California Public Utilities Commission (CPUC) has become especially concerned in recent years about the adequacy of natural gas supplies to the State, and the increasing price of natural gas. Our concerns are based on several developments that we've observed in the natural gas market over the past few years (particularly since about 2002), and that may well continue in the future. These developments include:

- natural gas prices that are about three to four times the prices in 2002,
- decreasing production rates from natural gas wells in North America,

- decreasing imports of natural gas from Canada, the United States' main source of natural gas imports, and a big part of California's portfolio,
- future increases in national gas demand, partly due to increasing natural gas demand for electric generation,
- the realistic possibility that a portion of Rocky Mountain production, another important part of California's supplies, will be diverted to Midwestern and eastern markets, and
- potential changes in the southwest and northwest interstate pipeline markets.

Increases in the price of natural gas, not just in California but across the U.S., have been occurring due to a variety of factors. Some of the primary reasons include the increased tension between national supply and demand, the price of oil, and the increased cost of drilling. Prices have more than tripled between 2002 and now, and the prices have also become much more volatile. It is important to keep in mind that, because the natural gas market is strongly integrated and California heavily depends on out-of-state supplies, trends in market prices that California consumers pay are heavily determined by overall North American market developments, including increased demand in the other states, Canada and Mexico. In fact, in the future, natural gas prices are expected to be increasingly influenced by international developments.

The CPUC believes that LNG should be a component of California's natural gas supply portfolio. As part of the State's Energy Action Plan (EAP), the CPUC and the California Energy Commission (CEC) are placing considerable emphasis on trying to meet a substantial portion of the State's energy needs through increasing reliance on energy efficiency measures and renewable energy for electric generation. However, even with strong demand reduction efforts and our goal of 20% renewables for electric generation by 2010, demand for natural gas in California is expected to roughly remain the same, rather than decrease, over the next 10 years. This is because, a substantial portion of the other 80% of electric generation (not met by renewable energy sources) will need natural gas as its fuel source, and natural gas will still be needed for the growing number of residential and business customers of the natural gas utilities. Therefore, the State's EAP also endorses obtaining new natural gas supply sources, such as LNG. Accordingly, one focus of the CPUC's current natural gas regulatory efforts has been to enable access to California's natural gas utility systems by new supply sources, including LNG.

A. Decreasing production rates from natural gas wells in North America

In recent years, there has been a noticeable decline in the rates of production of natural gas in both the U.S. and Canada. That is, analysts have found that once a typical new natural gas well begins producing, its rate of production is declining more rapidly than in

previous years. This is due to the fact that the most prolific sources and inexpensive supplies of natural gas have already been developed in most of the producing basins in North America. Consequently, more and more wells are needed to be drilled in order just to keep the level of production steady. This factor has dampened expectations about the level of domestic production in the future.

Natural gas price increases have lead to a dramatic increase in drilling of new natural gas wells. For example, in the U.S. the number of gas wells drilled in 2005 was 2 ½ times the number drilled in 1999, leading to a 33% increase in the total number of producing gas wells. However, there has been no significant increase in domestic production of natural gas - U.S. gas production was actually slightly lower in 2005 than in 1999. California natural gas production has declined by about 30% since 1999.

The U.S. Energy Information Administration (EIA) expects that, due to increased drilling and increased production in a small number of producing basins, total U.S. domestic production will increase in future years, but by only about 7.6% from 2005 to 2015, not nearly enough to match the EIA's forecasted 15.2% increase in national demand during that same period.[1]

B. Decreasing imports from Canada and diversion of Canadian supplies to other markets

The U.S. imported about 17% of its natural gas requirements from Canada in 2005, and Canada is by far the largest source of natural gas imports to the U.S., still well above LNG imports. California imported about 23% of its requirements from Canada in 2005. However, decreasing production rates are also occurring in Canada. In addition, many analysts expect that Canada will be using greater amounts of natural gas in the future for its own needs. The EIA now expects that imports of natural gas from Canada will decline by 45% in the next 15 years. This will have important implications for the U.S. in general and for California specifically.

Market developments had already impacted the price and volume of Canadian imports to California a few years ago. In the 1990's, Canadian Alberta supplies were the lowest-priced supplies available to California, largely because those supplies were constrained by the amount of pipeline capacity to transport gas to other markets in the U.S. Due to the low price, the interstate pipeline from Canada was typically full. However, new and expanded pipelines were built that allowed Alberta supplies to flow to Midwestern and eastern markets in the U.S. and to increase the Alberta supplies to eastern markets in

[1] Data from the EIA in this memorandum is from the EIA's Annual Energy Outlook 2007 (Early Release), which was just issued in the beginning of December, 2006.

Canada. This had a dramatic impact on the price of Canadian supplies to California. California imported 20% less gas from Canada in 2005 than in 2001, even though California still depended upon Canadian supplies for 23% of its demand in 2005.

C. Diversion of Rocky Mountain supplies to other markets

Fortunately for California, production of natural gas in the Rocky Mountains increased in recent years and more supplies were able to be delivered to California on a 2003 pipeline expansion from that region. California received more than twice as much Rocky Mountain supplies in 2005 compared to 2001.

However, just like Canadian production, Rocky Mountain production is also becoming constrained, and this has lead to the proposal of another major pipeline out of the Rocky Mountain region that will also deliver supplies to Midwestern and eastern markets. While market analysts expect that Rocky Mountain production will be one of the few natural gas producing areas in the U.S. that will increase production in the future, the new pipeline system could result in less Rocky Mountain production being delivered to California in the future.

D. Increasing demand, particularly from electric generation

While North American production is generally expected to remain flat or slightly increase in coming years, natural gas demand is expected to steadily increase, outstripping increases in domestic production and Canadian imports. Even if demand in California does not increase due to our strong energy efficiency and renewable energy programs, total natural gas demand in the U.S. is expected by the EIA to increase by 15.2% from 2005 to 2015. One of the main reasons that national demand is expected to increase is because electric generation relies heavily on natural gas as a fuel, and will do so increasingly in the future.

The amount of natural gas delivered as a fuel for electric generation in the U.S. increased by over 40% from 1997 to 2005 and amounts to well over 25% of total consumption. Natural gas used by electric generators in California is an even greater proportion of total demand, amounting to about 35-40% of total consumption.

The EIA forecasts an increase in natural gas demand by electric generators of about another 23% between 2005 and 2015. This estimate even assumes a 13% increase in coal use by electric generation. Increased emphasis on greenhouse gas emissions reductions may, however, result in even greater usage of natural gas, rather than coal or oil.

E. Changes in the interstate pipeline market

While there is currently ample interstate pipeline capacity from the producing gas basins connected to California, some changes have been occurring, and may be occurring in the future, that could have a significant impact on the State's ability to fully employ that pipeline capacity.

The FERC has clearly indicated that firm deliveries of natural gas on interstate pipelines can only be assured if shippers have contracts for firm capacity on those pipelines. Over the last 10 years, there has been a marked decline in the volume of capacity in firm contracts (which have California delivery points) between shippers and the two primary southwestern interstate pipelines, El Paso Natural Gas Company (El Paso) and Transwestern Pipeline Company (Transwestern). At the same time, there has been a large increase in the demand in states east of California. If parties in those states obtain firm pipeline capacity rights on Transwestern and El Paso, while certain firm contracts with California delivery points are not obtained by pipeline shippers, California would no longer be assured that it will be able to use the previously available capacity on these pipelines at all times, i.e. on a firm basis.

In addition, due to likely changes in the future configuration of gas flows on the Transwestern pipeline system, much of the capacity currently available to California on that pipeline, could be essentially diverted to the Phoenix area market. Transwestern is currently proposing a pipeline lateral on its system that could deliver natural gas to the Phoenix area. If firm capacity rights are obtained by pipeline shippers to the Phoenix area, this will result in a reduction of the amount of gas that could be delivered to California on Transwestern on a reliable basis.

Likewise, if more of the Alberta production is used in Canada, California would not be able to have the same amount of firm access to the Canadian supply, from which California previously benefited. In fact, Gas Transmission Northwest Corporation (GTN) estimates that there is approximately 450 MMcf/d of unsubscribed capacity on its interstate pipeline, which transports natural gas from Canada to California.

F. Increasing prices and price volatility

The price of natural gas has significantly increased since about 2002. During the 1990's and from the summer of 2001 through the fall of 2002, the average price was very steady, in the range of $2.00-$3.00 per million British thermal unit (MMBtu). During the California energy crisis, from the Summer of 2000 through the Spring of 2001, unreasonably high natural gas prices were being charged at the California border, resulting from market manipulation. Because there were ample supplies of natural gas, much of the rest of the North American markets at that time benefited from lower prices than California (with the exception of a few other western states affected by the California border prices.) There were many California ratepayers (residential and businesses), who had great difficulties paying for such high natural gas prices at that time in addition to the unreasonably high electric prices, which were independently caused by separate manipulation of the electric market.[2]

The price of natural gas has increased in years after 2002 and has become much more volatile, mainly due to market "fundamentals," i.e. the increased tension between North American supply and demand and certain other factors such as the price of oil. Higher natural gas prices are occurring not only in California but throughout North America. As noted above, the ability to produce natural gas supplies has become increasingly difficult. In addition, the cost of production has greatly increased. Most market forecasts indicate that demand will steadily increase to a greater degree than domestic production increases, while Canadian imports will decline, and that demand will only be met through increasing reliance on imports of LNG. Without new supplies from LNG to meet this demand in the future, there will be even greater upward pressure on the price of gas. Considering all of the electric generation plants dependent upon natural gas for fuel, natural gas price increases will cause electric prices to increase as well. There are many residential ratepayers and businesses, who cannot afford substantial increases in their gas and electric utility bills.

Further, if the supply/demand balance becomes tighter, the volatility of the price will become even more pronounced. Events such as swings in the weather (such as very warm weather in the summer, cold weather in the winter, or low precipitation) or sudden losses in production, e.g. due to hurricanes, will have even greater impacts on prices. Heightened price volatility makes it more difficult for consumers to manage their natural gas costs, and conditions in which constraints in supplies and/or infrastructure exist can be conducive to market manipulation.

[2] The damages to California ratepayers from just the natural gas manipulation during the energy crisis has been estimated to be approximately $8 billion.

Therefore, to help place downward pressure on natural gas prices, lessen the likelihood of skyrocketing prices, and enhance California's portfolio of supply, it is essential that LNG becomes a new source of supply for California.

G. Efforts must be placed both on demand reduction and obtaining new supplies

Rather than wait to see how the market develops in the future, the CPUC believes it is much more reasonable to take a balanced approach now to assure ourselves that the State will have adequate supplies and access to a diverse portfolio of supplies down the road. The State should both promote strong demand reduction efforts and further its access to a variety of natural gas sources, including new sources such as LNG supplies for at least a portion of its supply requirements in coming decades.

To gain access to LNG supplies will not occur quickly. The only terminal at this time which appears positioned to deliver LNG to California in the next few years is the Sempra LNG Costa Azul terminal in Baja Mexico. Supplies from that terminal will not begin until 2008 at the earliest. Even though that terminal is a short distance from the California border, California will only receive a portion of the natural gas from that terminal's 1000 MMcfd of delivery capability, as Mexican entities already have firm commitments for a substantial amount of that supply, and other demand, such as in Arizona, will be competing with California for the remaining supply.

II. LNG Import Terminals Should Be Sited in Remote Locations

The CPUC has recognized both the need for LNG terminals to provide additional natural gas supplies to California and the need to site them in remote locations away from densely populated areas, due to the hazardous nature of these terminals. For example, in 1944, LNG spilled from storage tanks in Cleveland, and the resulting LNG vapor cloud ultimately ignited into a fire, which killed 130 people and injured 225 people. More recently, on January 19, 2004, there was an accident at the LNG export facility in Algeria, where 27 people were killed and 56 people were injured from the resulting explosions and fires.

The Sempra LNG terminal is in a remote area in Baja California, Mexico and already more than 50% constructed. A review of the trade press, discussions with LNG project sponsors, and statements by market analysts at conferences indicate that in addition to the Sempra LNG terminal, the market will support an LNG import terminal along the California coast. There are at least three LNG import terminals, which have been proposed to be located in federal waters at least 10 miles offshore along the Southern

California coast and other potential projects as well. Therefore, LNG terminals do not need to be sited onshore in densely populated areas in California. There is no reason to expose the people in densely populated areas to any of the safety risks from an onshore LNG terminal when there are these much safer alternatives offshore.

Recent studies, which have used different assumptions to calculate the furthest distance that people could be harmed from the release of LNG as a result of an accident, terrorist attack or earthquake in worst-case scenarios, have estimated such distances to be in a range of between 4.3 to 7.3 miles from the LNG terminal or ship transporting LNG to the terminal. This is the distance that a flammable vapor cloud could spread before the LNG would become too dissipated and no longer be flammable. In all likelihood, the vapor cloud would be ignited and become a flash fire prior to reaching that maximum distance.

According to the Sandia National Laboratories Report (November 2005), in the event that the release of LNG is ignited right away and becomes a pool fire, the distance at which heat from the fire would pose a serious threat to people could reach 1.6 miles from the LNG terminal or LNG ship in a worst-case scenario. This is based upon the heat flux of 5 kilowatts per square meter (kW/m^2), which would be so hot as to cause a person to receive at least second-degree burns after an exposure to this heat of just 30 seconds.

Many scientists, including Dr. Jerry Havens (who has studied LNG safety issues for more than 30 years and is the CPUC's retained LNG safety expert), have criticized the use of the 5 kW/m^2 heat flux standard. People could be harmed by lower heat flux levels at distances more than 1.6 miles from the pool fire, because their exposure might well be for a period of time greater than 30 seconds. In a worst-case scenario, a lower heat flux of approximately 1.5 kW/m^2 (the level at which no significant harm would result to an individual even for extended exposure), would not be met until the distance from the pool fire was more than 4 miles.

Therefore, even in a worst-case scenario, an LNG import terminal at least 10 miles offshore would pose no danger or risk to the general population onshore. Under all of the recent studies of worst-case scenarios, the flammable vapor cloud, heat and/or fire would dissipate and would not spread to reach the shoreline or even get as close as 2.6 miles offshore.

For these same reasons, it is also clear that an LNG import terminal should not be sited onshore in or near a densely populated area. A worst-case scenario accident at an LNG terminal could endanger very many people in a densely populated area, living or working less than the above distances from the terminal (e.g., up to 7.3 miles for a flammable vapor cloud or 4 miles for the heat from a pool fire.) Onshore fires can also lead to secondary fires and spread to even greater distances than offshore fires, which will not spread on ocean water beyond the maximum distance that the LNG vapor cloud remains flammable (i.e., 7.3 miles).

Even in LNG accidents that resulted in releases affecting shorter distances than in the worst-case scenarios, too many people in a densely populated area could be in harm's way. Just a ten-minute accidental spill from an LNG ship while it is unloading LNG at a terminal could result in the release of up to 550,000 gallons of LNG.

For these reasons, LNG import terminals should not be sited in densely populated areas in California, particularly because California has much safer alternatives: the proposed LNG terminals at least 10 miles offshore.

cc: Commissioner Brown
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