Ozone precursors emitted within California Coastal Waters are likely to be transported towards the California coastline and contribute to ambient ground-level ozone impacts on shore within Ventura County and Los Angeles County. The State Lands Commission has determined that this impact is significant as the Project results in a cumulatively considerable net increase of ozone precursor emissions in an area that is upwind of the ozone nonattainment areas of Ventura County and Los Angeles County.

Proposed Mitigation

MM AIR-5c. Documentation of Engine Specifications.

MM AIR-5c. requires the Applicant to prepare and maintain specified documentation that demonstrates implementation of its emission reduction measures (AM AIR-5a. and 5b.).

The Applicant has incorporated changes into the Project that would lessen Project NO_x and ROC emissions from marine vessels through the use of natural gas in the engines of LNG carriers instead of the more typical diesel or heavy fuel oil (AM AIR-5a) and the use of air pollution control equipment on the diesel-fueled tugboats and crew/supply boat (AM AIR-5b). For AM AIR-5a, natural gas in the LNG carriers would be used at all times while the LNG carriers are operating within California Coastal Waters (i.e., within approximately 90 miles offshore). CARB has determined that air emissions beyond the boundary of California Coastal Waters are not likely to migrate to the California coast or Ventura County waters.

This Project represents the first time that LNG carriers serving a port within the United States would operate beyond Federal waters using less-polluting natural gas as a fuel source, rather than diesel or heavy fuel oil. With respect to AM AIR-5b, the air pollution control equipment for the diesel-fueled tugboats and crew/supply boat represents state-of-the-art control technology for marine diesel-fueled vessels.

In addition, the Applicant would retrofit engines on two marine vessels (long haul tugs) to reduce NO_x emissions. The CARB estimates that these engine retrofits would generate NO_x emission reductions of 140.4 tons per year that would benefit the regional area of the Project (excepting the Bay Area). The USEPA estimates that the retrofitting of these vessels would result in NO_x emission reductions of 98.7 tons per year (excepting the Bay Area).

Since the publication of the Final EIS/EIR, the Applicant has identified a modification to the SCV technology used on the FSRU that would further reduce emissions of air pollutants, including, NO_x and ROC. This modification is discussed further under CEQA Finding AIR-4 and the associated changes to emissions are reflected in the following discussion.

As part of air permit-to-construct application procedures, the Applicant committed to the USEPA to achieve emissions reductions to an amount equal to annual NO_x emissions from FSRU equipment and LNG carrier engines used to power LNG transfer pumps (61.3 tons per year). Thus, total NO_x emission reductions designated as beneficial to

areas downwind of the Project area would exceed NO_x emissions from the FSRU/LNG pumping by a value of 79.1 tons per year according to the estimates outlined by the CARB or by 37.4 tons per year according to the estimates from the USEPA. These additional NO_x emission reductions are less than the total NO_x emissions estimated for Project vessels operating in California Coastal Waters by about 4.7 tons per year according to the CARB's estimates, or by 47.3 tons per year according to the USEPA's estimates.

The State Lands Commission further finds that the Applicant has provided an unprecedented amount of emissions reductions to counterbalance emissions from LNG carriers operating from the boundary of Federal waters to the boundary of California Coastal Waters. While there would be a net increase in emissions of ozone precursors caused specifically by LNG carriers, no further technologies or engineering methods, considered as feasible mitigation measures, are available to further reduce carrier emissions.

The Project would, however, create a net increase in NO_x emissions from marine vessel traffic regardless of whether the CARB or USEPA's estimates of NOx emissions reductions are considered. The 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 Applicant proposed no further measures to mitigate ozone precursor emissions from Project marine vessels operating in Federal waters/California Coastal Waters beyond those discussed above, but will continue to consult with the CARB and the USEPA.

The State Lands Commission finds that the emissions of ozone precursors from project marine vessels represent a significant and unavoidable impact (Class I). The impact remains significant even after the Applicant has incorporated into the Project the use of state-of-the-art technology to control emissions from the tugboats and crew/supply boats that would operate within Ventura County waters [3 nautical miles from the coastline] and in Federal waters. No further feasible technologies or engineering methods are available to further reduce emissions from these particular vessels. Moreover, the NO_x emission reductions associated with the engine retrofit projects proposed by the Applicant would be greater than the NO_x emissions from tugboats and crew/supply boats operating within Ventura County waters and in Federal waters.

CEQA Finding No. AIR-9

Air Quality

Impact: **AIR-9:** Temporary Increases in Ambient Concentrations of Air Toxic Pollutants Due to Emissions from Construction Activities

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Project onshore construction activities in Ventura and Los Angeles Counties would generate emissions of air toxic contaminants. The mitigation measures for Impact AIR-5 would reduce air toxic contaminant emissions, and the dispersion modeling analysis indicates the maximum ambient impacts caused by emissions from onshore construction activities would be less than health risk guideline levels.

Due to the distance to potential receptors, offshore construction activities would not be expected to result in adverse impacts to sensitive receptors.

Proposed Mitigation

MM AIR-1e. USEPA Tier 3 Nonroad Engine Standards.

MM AIR-1f. Construction Emissions Reduction Plan.

MM AIR-1g. Construction Equipment Documentation.

MM Air-1e would require that all diesel equipment with a rating between 100 and 750 horsepower be equipped with engines that comply with USEPA Tier 3 nonroad engine standards. This mitigation measure would reduce air pollutant emissions by precluding the use of applicable construction equipment that does not meet these standards. Air quality analyses predict that the reduced construction emissions due to this mitigation measure would reduce impacts from air toxic contaminant emissions to less than health risk guideline levels.

MM AIR-1f specifies the preparation of a plan to catalog the emissions reductions elements, including Applicant measures and mitigation measures that the Applicant must incorporate into construction contracts. The plan would also include additional specific measures that represent best management practices for construction activities, which are expected to result in reductions in air pollutant emissions.

MM AIR-1g requires the Applicant to provide appropriate documentation to confirm the implementation of Applicant emission reduction measures and mitigation measures. This mitigation does not provide for additional emission reductions, but provides for a mechanism for confirming the emission reductions quantified under Applicant measures and other mitigation measures.

Implementation of the mitigation measures described above would, for the reasons stated, reduce the impacts to less than health risk guideline levels, and the impact would be reduced to a level below its significance criteria.

CEQA Finding No. BioMar-2

Marine Biology

Impact: **BioMar-2:** Temporary Avoidance of the Area Due to Increased Turbidity from Construction Activities Offshore or Accidental HDB Release of Drilling Fluids

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

A release of drilling fluids and bentonite into the subtidal environment during HDB operations could temporarily increase turbidity. Increases in turbidity at the offshore exit point could cause fish to avoid this area. Overall impacts on fish and benthic communities would be negligible, however, considering the limited area impacted by a release event or by construction activities.

Proposed Mitigation

MM WAT-3a. Drilling Fluid Release Monitoring Plan.

MM WAT-3a would require a plan of specified content to minimize the potential for releases of drilling fluids and require drilling fluids to be properly cleaned up and appropriate agencies notified should a release occur. The plan would incorporate best management practices that have been proven in other projects to reduce the impacts from releases of drilling fluids.

With the implementation of the proposed mitigation measure, the impact on marine species would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. BioMar-3

Marine Biology

Impact: **BioMar-3:** Temporary or Permanent Alteration or Disturbance of Marine Biota Behavior or Sensitive Habitats

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction and/or operational activities could alter EFH or sensitive habitats (beach spawning areas or hard bottom substrate,) resulting in cessation or reduction of feeding or reproduction, area avoidance, or changes in migration patterns. The Applicant would avoid critical spawning habitat for special status species (grunion) and sensitive habitats (hard bottom areas) on which many sensitive species rely for survival. The Applicant would use lighting sparingly and in limited areas and intensities and would also use lighting controls such as shielding devices. The Applicant would also use noise reduction measures including muffling during construction.

Proposed Mitigation

MM BioMar-3b. Monitoring.

MM BioMar-3c. Avoidance.

MM NOI-1A. Efficient Equipment Usage.

MM BioMar-3b would prevent interference with spawning by avoiding construction during spawning events by requiring monitoring of Ormond Beach during grunion spawning periods and requiring that a qualified biologist determine when construction will begin.

MM BioMar-3c would reduce impacts on sensitive species by requiring that hard bottom habitat be avoided.

Under MM NOI-1a, operation of equipment on an as-needed basis would result in fewer pieces of equipment operating simultaneously. The operation of less equipment at any given time would reduce the overall noise level. By using equipment engine covers and mufflers in good working condition, a reduction of up to 20 dBA could be achieved for individual pieces of equipment.

The implementation of the mitigation measures described above would, for the reasons stated, reduce impacts to a level below its significance criteria.

CEQA Finding No. BioMar-5

Marine Biology

Impact: **BioMar-5:** Noise Disrupting Marine Mammal Behavior

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or Project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

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. Project designs and manufacturers' noise source levels data for the proposed machinery elements were used to calculate estimated radiated noise potentially introduced to the marine environment by the Project. Project noise levels and reduction levels were estimated using data from the literature and based on basic physics, acoustic theory, and empirical formulations. Avoiding the gray whale migration season would reduce the numbers of certain marine mammals exposed to noise during construction. No impulse sounds are anticipated during normal construction and operational activities; therefore, death of deep-diving cetaceans due to impulse noise is unlikely.

For both marine mammals protected under the Endangered Species Act and marine mammals protected under the Marine Mammals Protection Act., significant noise levels are defined by NMFS as follows:

- Level A take threshold for continuous noise = 180 dB re 1 µPa --- rms
- Level B take threshold for continuous noise = 120 dB re 1 µPa --- rms.

The Applicant reports worst case construction noise levels for both the offshore marine pipeline spreads and installation of the FSRU mooring and riser systems would be 180 dB re 1 µPa --- rms. The worst case scenarios in both construction areas (all equipment continuously running at the same time and place) is unlikely. In addition, the application of mitigation measures to reduce noise generated would be expected to bring construction noise to below the Level A harassment threshold. However, the Applicant

has estimated that the zone of noise influence representing the Level B harassment threshold would have a radius of 10 km from the source.

Six out of the seven operating scenarios proposed by the Applicant have noise source levels that exceed 180 dB re 1 µPa --- rms by 1.6 to 12.6 dB. One operating scenario which can be used approximately 90 percent of the time uses vibration isolators to bring the noise source level slightly below the Level A harassment threshold, but it would still be well above the Level B harassment threshold.

Proposed Mitigation

MM BioMar-5a. Noise Reduction Design.

MM BioMar-5b. Acoustic Monitoring Plan.

MM BioMar-5c. Helicopter Altitude.

MM NOI-1a. Efficient Equipment Usage

MM BioMar-5a would reduce noise from the operation of the FSRU by incorporating noise reduction strategies in the design to reduce noise output to the maximum extent possible. Proposed noise reduction designs would reduce the radius distance from the Project activities noise that could be heard by marine mammals and would reduce the intensity of Project related noise, thus these measures would reduce the number of individuals potentially affected by such noises.

MM BioMar-5b would allow for adaptive management during project operations. To ensure that the proposed noise reduction techniques are effective, the Acoustic Monitoring Plan will require that site-specific baseline and empirical data be obtained, behaviors of marine mammals exposed to construction and operational noise be tracked and documented, and acoustic monitoring results be compared to NOAA Fisheries (NMFS) accepted thresholds to determine whether noise levels can be reduced and whether continued or future monitoring is necessary.

Under MM NOI-1a, operation of equipment on an as-needed basis would result in fewer pieces of equipment operating simultaneously. The operation of less equipment at any given time would reduce the overall noise level and thus potentially reduce the number of marine mammals that could be exposed to noise. Additionally, efficient use of equipment during construction and operations would reduce the duration of time and intensity of certain noises which may be introduced into the marine environment. By using equipment engine covers and mufflers in good working condition, a reduction of up to 20 dBA could be achieved for individual pieces of equipment.

MM BioMar-5c would require maintenance of a minimum helicopter altitude (except during take-off and landing) to reduce noise that may disrupt marine mammals due to the infrequent use of helicopters.

Implementation of the mitigation measures described above would, for the reasons stated, reduce the intensity and duration of anthropogenic noise introduced to the

marine environment and would thus reduce impacts on marine mammals, but it is unclear whether impacts would be reduced to a level below its significance criteria; therefore this impact is considered potentially significant after application of all feasible mitigation.

CEQA Finding No. BioMar-6

Marine Biology

Impact: **BioMar-6:** Mortality and Morbidity of Marine Biota from Spills

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or Project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Although rare, an accidental release of a significant amount of oil or fuel during construction or operation, or LNG spills or a natural gas leak from subsea pipelines, could cause morbidity or mortality of marine biota, including fish, invertebrates, seabirds, and sea turtles, through direct contact or ingestion of the material. In the event of an oil or fuel spill, contingency plans would be implemented and the released material would be recovered to the extent possible. A large accidental release of LNG into the marine environment could have a potentially significant impact on marine organisms, including hypothermia, frostbite, or death, but would dissipate rapidly unless ignited; a fire could injure seabirds of other species that would come into contact with flames or smoke.

Although information about the effects of methane and mercaptan on marine organisms is limited, a leak of natural gas (with the odorant mercaptan added) from the subsea pipelines could potentially impact marine organisms depending on the location and volume of the release, as well as exposure time and environmental conditions. If accidentally released from the pipeline, the gases would be quickly dispersed in the water column due to the oceanic conditions (currents and upwelling) and would not remain either in the water column or the sediments long enough to cause asphyxiation to marine organisms.

Proposed Mitigation

MM PS-1e. Cargo Tank Fire Survivability.

MM PS-1f. Structural Component Exposure to Temperature Extremes.

MM PS-1g. Pre- and Post-Operational HAZOPs.

MM PS-1e would improve the ability of LNG storage tanks to withstand the effects of a fire and could also potentially limit the extent of damage caused by an incident. It is expected that additional advances in cargo tank insulation will be made in the near future, and this mitigation measure would help to ensure that the best available technology is used.

MM PS-1f would reduce the likelihood of a major structural failure by requiring consideration of potentially improbable but high consequence events during Project design. Safety engineering, HAZOPs, and quantitative risk assessment (QRA) are widely used in processing industries to improve safety; these methodologies represent best management practices.

MM PS-1g would reduce the likelihood of a potential emergency incident at the FSRU and would improve the crew's response if such a situation were to occur. HAZOPs have been recognized to reduce risk by both industry and regulations such as the California and Federal Risk Management and Prevention Programs. Conducting a HAZOP prior to operation would help to refine operations practices and emergency response provisions and subsequent HAZOPS during operations would critically evaluate actual practices.

The proposed design/engineering measures are directed at reducing the potential for such a spill to occur; and limiting the duration and area of exposure if such a spill does occur, thus reducing the potential for impacts to marine organisms. However, even with the implementation of the measures above, impacts on marine biota from a large accidental release of LNG or fuel would remain potentially significant after application of all feasible mitigation.

CEQA Finding No. BioMar-8

Marine Biology

Impact: **BioMar-8:** Release of LNG, Natural Gas, Fuel, or Oil Causes Injury or Mortality of Marine Mammals

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or Project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

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. Small LNG spills would rapidly dissipate but marine mammals in the area of a large LNG spill or resulting fire would likely suffer mortality. Although cleanup operations would reduce impacts of a diesel or other fuel spill, marine mammals could suffer adverse effects. Any impacts on marine mammals during a spill event or clean-up would be documented and reported in accordance with regulatory requirements.

Proposed Mitigation

MM PS-1e. Cargo Tank Fire Survivability.

MM PS-1f. Structural Component Exposure to Temperature Extremes.

MM PS-1g. Pre- and Post-Operational HAZOPs.

MM MT-3f. Live Radar and Visual Watch.

MM PS-1e would improve the ability of LNG storage tanks to withstand the effects of a fire and could also potentially limit the extent of damage caused by an incident. It is expected that additional advances in cargo tank insulation will be made in the near future, and this mitigation measure would help to ensure that the best available technology is used.

MM PS-1f would reduce the likelihood of a major structural failure by requiring consideration of potentially improbable but high consequence events during Project design. Safety engineering, HAZOPs, and quantitative risk assessment (QRA) are

widely used in processing industries to improve safety; these methodologies represent best management practices.

MM PS-1g would reduce the likelihood of a potential emergency incident at the FSRU and would improve the crew's response if such a situation were to occur. HAZOPs have been recognized to reduce risk by both industry and regulations such as the California and Federal Risk Management and Prevention Programs. Conducting a HAZOP prior to operation would help to refine operations practices and emergency response provisions and subsequent HAZOPS during operations would critically evaluate actual practices.

Finally, MM MT-3f would reduce the likelihood of a collision because the crew would have early warning of nearby vessels or aircraft and would assist in managing an incident should one occur. The provision for live radar and visual watch at the vessel control center of the FSRU is comparable to the established and proven in service, policies, and procedures of the Louisiana Offshore Oil Port (LOOP), the only operational oil deepwater port in the U.S. These measures would reduce the potential for incidents due to operational errors, upsets, or equipment failures or natural phenomena.

No measures directed specifically at marine mammals are available to mitigate the effects of a large LNG spill event. The proposed design/engineering measures are directed at reducing the potential for such a spill to occur; limiting the duration and area of exposure would reduce the potential for impacts to marine mammals. However, even with the implementation of the measures above, impacts on marine mammals from a large accidental release of LNG or fuel would remain potentially significant after application of all feasible mitigation.

CEQA Finding No. BioMar-10

Marine Biology

Impact: **BioMar-10:** Entanglement of Marine Mammals and Turtles

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Marine mammals or sea turtles could become entangled in construction or operation equipment, causing injury or mortality.

Proposed Mitigation

MM BioMar-10a. Deployment of Potentially Entangling Material, and

MM BioMar-10b. Notification.

Under MM BIOMAR-10a, monitors would observe the deployment of materials that have the potential to entangle marine mammals and would ensure that the potentially entangling material is deployed only for the amount of time needed. If an entanglement appears likely, operators would remove as much potentially entangling material as possible and make sure that slack is taken out of remaining material.

Under MM BioMar-10b, in the unlikely event that a marine mammal or sea turtle is entangled, it would be reported immediately to the stranding coordinator at NOAA Fisheries in Long Beach and Santa Barbara so that a rescue effort can be initiated.

Implementation of the mitigation measures discussed above would reduce impacts on marine mammals to a level below the significance criteria by reducing the amount of potentially entangling material in the water column, by providing monitors to observe activities, and by implementing a notification system that would immediately lead to rescue efforts, thus reducing the possibility of a marine mammal or sea turtle becoming entangled and increasing probability of a successful rescue if entanglement occurs.

CEQA Finding No. TerrBio-1

Terrestrial Biology

Impact: **TerrBio-1:** Temporary Increase in Sedimentation

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities could cause increased sedimentation and soil erosion, and expose contaminated soils during trenching activities.

Proposed Mitigation

MM TerrBio-1b. Spill Containment/Management.

MM WAT-3a. Drilling Fluid Release Monitoring Plan.

MM WAT-4a. Strategic Location for Drilling Fluids and Cuttings Pit.

Under MM TerrBio-1b, the Applicant or its designated representative would be required to prevent and respond to spills and prevent contamination of soils and water. These measures are best management practices and are recognized measures to prevent spills and clean them up if they should occur.

MM WAT-3a would require a plan to minimize the potential for releases of drilling fluids and require drilling fluids to be properly cleaned up and appropriate agencies notified should a release occur. The plan would incorporate best management practices that have been proven in other projects to reduce the impacts from releases of drilling fluids.

MM WAT-4a would ensure that drilling fluids and cuttings would be collected in a pit located sufficiently far from stream banks, stream overflow areas, and groundwater such that drilling fluids and cutting remain in the pit. In addition, the pit would be protected with silt fencing, recontoured and revegetated at the completion of drilling spoils disposal. The pit would be monitored in the event of a drilling fluid release to ensure that effective cleanup measures would be taken.

Mitigation measures avoid or reduce the potential for soil and hazardous materials to enter wetlands, surface water features, and sensitive habitat by requiring construction barriers such as erosion control devices and buffer set-backs from sensitive habitat.

Impacts on water quality from sedimentation would have adverse impacts on special status plants or wetlands; however, with implementation of the mitigation measures described above, impacts would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. TerrBio-2

Terrestrial Biology

Impact: **TerrBio-2:** Temporary or Permanent Impacts Regarding Construction, Operation, and Maintenance Effects on Rare and Special Status Plants

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Upland vegetation removal during onshore pipeline construction, maintenance, and repair activities could result in the loss of special status plants.

Proposed Mitigation

MM TerrBio-2f Riparian Avoidance and Restoration.

MM TerrBio-2g Tree Avoidance and Replacement.

MM TerrBio-2f requires that the Applicant or its designated representative avoid, minimize, and compensate for impacts on riparian habitat during construction. Preplanning of restoration, monitoring, and replacement of habitat and trees would effectively reduce impacts on riparian habitat.

MM TerrBio-2g requires that the Applicant or its designated representative, to the extent possible, avoid, minimize, and compensate for impacts on trees. Implementation of MM TerrBio-2g would require the Applicant to replace tree rows at ratio of 1:1. Replacement trees would be 15-gallon trees approximately 8 to 10 feet in height. The type of tree planted would be approved by the CDFG and/or the landowner. Therefore, the potential impact of the removal of tree rows would occur primarily during the period of construction and would be reduced to below its significance criteria in the long-term.

Impacts on rare and special status plants would be reduced by the application of the mitigation measures described above to a level below its significance criteria by avoiding or reducing impacts on special status plants, sensitive and high-value wildlife habitats, and trees protected by local ordinance or policies and subsequently through restoration activities.

CEQA Finding No. TerrBio-3

Terrestrial Biology

Impact: **TerrBio-3:** Temporary or Permanent Changes to Wetlands or Waters of the U.S. during Construction

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction (such as trenching) in wetlands or waters of the U.S. could remove vegetation, disrupt the hydrology of the wetlands within and adjacent to the construction area, or alter the habitat for special status plant species.

Proposed Mitigation

MM TerrBio-3a. Avoid, Minimize, or Reduce Impacts on Wetlands.

MM TerrBio-2f. Riparian Avoidance and Restoration.

MM TerrBio-3a requires that wetland areas be identified and marked, including those containing special status species; that construction ROWs through wetlands and waters be limited; that operation of construction equipment within wetlands and waters be limited; and that prefabricated mats be used in saturated areas and areas with standing water. Taking these precautions when working in or near waters of the United States are well established practices that have been demonstrated to successfully reduce impacts.

MM TerrBio-2f requires that the Applicant or its designated representative avoid, minimize, and compensate for impacts on riparian habitat during construction. Preplanning of restoration, monitoring, and replacement of habitat and trees would effectively reduce impacts on riparian habitat.

Implementation of these mitigation measures would result in reduced impacts overall by avoiding impacts on special status species and by limiting the area in which construction would occur. In addition, special precautions would be taken when operating within wetlands and waters of the United States that would avoid or reduce impacts on wetlands and waters of the United States.

With the implementation of mitigation measures described above, the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. TERRBIO-5

Terrestrial Biology

Impact: **TerrBio-5:** Direct Permanent Impact on Wildlife Mortality

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities associated with pipeline installation, staging areas, HDD or HDB locations, and access roads could cause the mortality of small mammals, reptiles, and other less-mobile species.

Proposed Mitigation

MM TerrBio-5a, Pre-Construction Wildlife Surveys.

MM TerrBio-5a requires that, to minimize the potential for causing mortality of local wildlife, the Applicant engage a qualified wildlife biologist to conduct additional pre-construction surveys in advance of any vegetation clearing, or excavation or other activity that causes disturbance to surface soils. Surveys would be completed by a competent biologist, familiar with local birds, mammals, amphibians, and reptiles, with survey requirements including any relevant agency protocols, and survey seasons. By identifying whether sensitive species are present, prescribed measures can be implemented as needed to reduce potential impacts.

It should be noted that for purposes of the impact analyses and resultant mitigation in the Final EIR, all relevant species are presumed to exist in the vicinity of the proposed Project.

With the implementation of this measure, the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. GEO-1

Geology

Impact: **GEO-1:** Worsens Existing Unfavorable Geologic Conditions and/or Releases Toxic or Other Damaging Material into the Environment

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities could temporarily worsen existing unfavorable geologic conditions. Trenching and boring activities could increase erosion, differential compaction, or scour, resulting in hazardous conditions for the pipelines. The trenching or boring could also provide preferential flow paths for fluids in the subsurface. During installation, transitory and sporadic erosion and scour such as during a rainstorm could occur that could expose the onshore pipelines. During construction frac-outs (loss of drilling fluid) may occur.

Proposed Mitigation

MM GEO-1b. Backfilling, Compaction, and Grading.

MM WAT-3a. Drilling Fluid Release Monitoring Plan.

MM GEO-1b would limit the construction effects on unfavorable geologic conditions through adequate planning and design such as proper backfilling and compaction and other standard construction practices, and geologic conditions would be restored to their preexisting conditions.

MM WAT-3a would require a plan to minimize the potential for releases of drilling fluids and require drilling fluids to be properly cleaned up and appropriate agencies notified should a release occur. The plan would incorporate best management practices that have been proven in other projects to reduce the impacts from releases of drilling fluids.

With the implementation of the mitigation measures described above,the impact would be reduced, for the reasons stated, to a level below its significance criteria.

CEQA Finding No. GEO-2

Geology

Impact: **GEO-2:** Cause a Loss of a Unique Paleontological Resource

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities could disturb or destroy paleontological resources; such impacts are typically permanent. Several areas along the Center Road Pipeline and Line 225 Pipeline Loop are tentatively classified as having a high sensitivity for containing significant paleontological resources.

Proposed Mitigation

The following Agency Recommended Mitigation Measure (MM) has been identified to reduce this impact:

MM GEO-2a. Inspection.

MM GEO-2a would minimize potential impacts on significant paleontological resources through identification and protection of such resources. The paleontologist supervising the excavation will have the ability to stop construction if potentially significant resources are identified and threatened by the Project. The paleontological monitoring of excavations that would be conducted by a qualified paleontologist is consistent with standard construction practices used for similar projects to protect such resources.

With the implementation of the mitigation measure described above the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. GEO-3

Geology

Impact: **GEO-3:** Expose People or Structures to Adverse Effects Due to Direct Rupture along Fault Lines, Ground Shaking, or Seismic-related Ground Failure

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Damage to pipelines or other facilities could occur due to direct rupture (ground offset) along fault lines. The offshore gas pipelines could be adversely affected by seismic activity but would be designed to accommodate, based on the then most current information, anticipated maximum lateral/vertical motion from earthquakes (permanent deformation of seafloor) during the final design stage. If seafloor motion were to exceed allowable stresses in the pipelines, pipelines could rupture and cause a leak. The loss of pressure should induce the safe shut-down of the system and natural gas would rise to the surface. Onshore pipelines would be similarly designed to accommodate anticipated displacement by earthquakes and a loss in pressure would activate their shut-down system. The CSLC requires the incorporation of current seismological engineering guidelines and other recognized industry guidelines for seismic-resistant design at all fault crossings that are subject to State jurisdiction.

Proposed Mitigation

MM GEO-3c. Geotechnical Studies.

MM GEO-3d. Design and Operational Procedures.

MM PS-4c. Install Additional Mainline Valves Equipped with Either Remote Valve Controls or Automatic Line Break Controls.

MM GEO-3c would ensure that the pipeline is adequately planned by requiring approved final site-specific geotechnical and seismic hazard studies be conducted prior to final pipeline design and construction. Such studies covering suspected active fault crossings to accurately define the fault plane location, orientation, and direction of anticipated offset, and which include the magnitude of the anticipated offset at the fault locations have been successfully used in similar construction projects to refine fault crossing design parameters.

MM GEO-3d would ensure that the pipeline is adequately planned and designed by requiring evaluation of a larger trench, engineered backfill, thicker wall pipe, and telemetric control for final pipeline design. These measures reduce the likelihood that the pipeline would rupture.

MM PS-4c would limit the affected area from a potential pipeline accident by allowing SoCalGas to automatically control the influx of gas into sections of the pipeline system. A team of engineers from the CSLC and CPUC evaluated project-specific pipeline valve spacing and design and determined that they were appropriate to limit the potential release duration and the quantity of natural gas that might be released from a ruptured pipeline segment by reducing the distance between the mainline valves.

With the implementation of the mitigation measures described above, the impact would be reduced, for the reasons stated, to a level below its significance criteria.

CEQA Finding No. GEO-4

Geology

Impact: **GEO-4:** Cause Severe Damage to Project Components as a Direct Consequence of a Geologic Event, Releasing Toxic or Other Damaging Materials into the Environment

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Ground shaking from earthquakes, which is of a transitory and sporadic nature, could damage Project components. The aboveground structures, such as the offshore part of the pipelines or the onshore processing facilities, would be subject to strong ground shaking, and strong earthquake-induced ground shaking could result in significant damage to aboveground structures and lead to failure of open trenches during construction. Ground shaking generally impacts buried modern welded pipelines only when the shaking induces mass movement such as liquefaction, differential settlement, or landslides. Pipe damage also may result from transient ground deformation caused by the peak ground velocity of the seismic wave.

Proposed Mitigation

MM GEO-4a. Design for Ground Shaking.

MM GEO-4a would allow pipelines and other structures to withstand intense ground shaking without collapsing or rupturing by requiring employment of proper seismic design. The design guidelines that would be followed are widely used and accepted in the industry.

With the implementation of the mitigation measure described above, the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. HAZ-2

Hazardous Materials

Impact: **HAZ-2:** Release of Oil or Hazardous Materials Spills Could Result in Soil Contamination due to Pipeline Construction Activities

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Activities associated with site preparation, construction, and drilling, as well as operations and maintenance activities, could result in an accidental spill of hazardous materials or oil and exposure of workers or the public. Operation of horizontal directional drilling (HDD) or horizontal directional bore (HDB) equipment could result in the accidental release of bentonite drilling fluid, a non-hazardous drilling fluid. Construction activities could also result in spills from accidents or improper handling or disposal of fuels or hazardous materials. Vehicle accidents could result in fuel spills from rupturing of fuel tanks, and hazardous materials spills could occur if hazardous material containers were compromised. A spill could expose workers and the public to levels of hazardous materials in excess of applicable regulations. Improper handling or containment of hazardous materials stored on site also may result in spills to which the public or workers could be exposed.

The Applicant, or its designated representative, would maintain hazardous materials at the staging areas in proper storage containers and with sufficient secondary containment in accordance with best management practices, in addition to compliance with Federal and State regulations. Hazardous materials stored temporarily in staging areas would be stored on pallets within fenced and secured areas and protected from exposure to weather.

Proposed Mitigation

MM HAZ-2a. Maintain Equipment.

MM HAZ-2b. Hazardous Material Contingency Plan.

MM WAT-3a. Drilling Fluid Release Monitoring Plan.

MM HAZ-2a requires the maintenance of equipment in operating condition to reduce the likelihood of fuel or oil line breaks and leakage.

MM HAZ-2b requires the preparation and prior approval of a Hazardous Material Contingency Plan and training workers in the implementation of the plan would ensure that contaminated soil and groundwater would be properly managed and would reduce the likelihood of spills of hazardous materials.

MM WAT-3a would require a plan to minimize the potential for releases of drilling fluids and require drilling fluids to be properly cleaned up and appropriate agencies notified should a release occur. The plan would incorporate best management practices that have been proven in other projects to reduce the impacts from releases of drilling fluids.

With the implementation of the measures described above, this impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. HAZ-3

Hazardous Materials

Impact: **HAZ-3:** Release of Existing Contaminants from Sediments, Soils, or Groundwater

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities could unearth existing contaminated sites onshore and offshore, causing potential health hazards to construction workers, the public, and marine and terrestrial ecology.

The offshore route would not pass through any known hazardous material sites; therefore, encountering offshore contamination during construction would be unlikely.

There are potential hazardous material or hazardous waste sites within 0.5 mile (0.8 km) of the proposed Center Road Pipeline and Line 225 Pipeline Loop routes, and onshore oil seeps have been identified in the general area near the Line 225 Pipeline Loop. In addition, the alignment of the Line 225 Pipeline Loop from approximately MP 0.35 to MP 1.0 would follow the southern edge of Operable Unit (OU) 1 south of the Whittaker-Bermite cleanup site and OU 2 from about MP 1.0 to MP 1.35.

Construction crews could potentially encounter contaminated soil or water during trenching and drilling operations. In addition, an unknown or unrecorded disposal site may be encountered. If potential contamination is uncovered, members of the public could be exposed through direct contact or inhalation of contaminated materials. Adverse health effects, however, are unlikely to occur from a short-term exposure to contaminated soils or waters.

Proposed Mitigation

MM HAZ-3a. Consult with the Department of Toxic Substances Control (DTSC) Regarding Cleanup of Soil and Groundwater at Whittaker-Bermite Site (MP 0.2 to 1.25).

MM HAZ-3b. Onshore Surveys.

MM HAZ-3a Consultation regarding the progress of cleanup at the Whittaker-Bermite site would help to avoid encountering contaminated soil and groundwater during

construction and would identify how to handle any newly discovered contaminated soils to minimize exposure of workers and the public to these contaminants. .

MM HAZ-3b. Although much of the onshore pipeline routes pass through existing ROWs that have been previously cleared for the presence of hazardous materials, conducting surveys for areas where the new onshore pipeline routes diverge from existing ROWs would help to identify contaminated soils so that they can be properly managed during construction.

With the implementation of the measures described above, this impact would, for the reasons stated, be either avoided or reduced to a level below its significance criteria.

CEQA Finding No. HAZ-4

Hazardous Materials

Impact: **HAZ-4:** Potential Disturbance or Detonation of Unexploded Ordnance due to Onshore or Offshore Construction

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Offshore pipeline installation and onshore pipeline construction activities could encounter UXO, causing an explosion that could result in serious injuries or fatalities to workers or the public, and—for offshore locations—serious injuries or fatalities to marine life from subsurface blast pressures.

Approximately 12.2 NM (14 miles or 22.6 km) of the subsea pipeline, i.e., from MP 3 to MP 17, would lie within the Point Mugu Sea Range. Although the proposed pipeline route is not an area where missiles are not ordinarily targeted, UXO, drones, or other debris from missile testing may be located near or within the proposed subsea pipeline corridor. Onshore, the part of the proposed Line 225 Pipeline Loop route from about MP 0.2 to about MP 1.25 runs along the southern boundary of the Whittaker-Bermite cleanup site, where UXO has been identified as a site-wide concern. However, the existing Line 225 pipeline ROW was cleared of UXO during its construction in the late 1950s and early 1960s and has been patrolled and maintained on a routine basis for the past five decades. Because of its location within an existing ROW, the Line 225 Loop pipeline would not likely encounter UXO.

Proposed Mitigation

MM HAZ-4a. Offshore Surveys.

MM HAZ-4b. Coordination with the California Department of Toxic Substances Control.

MM HAZ-4a Conducting offshore surveys for UXO within the Point Mugu Sea Range would minimize the chance of encountering UXO.

MM HAZ-4b. Coordinating with the DTSC regarding the Whittaker-Bermite site would minimize the chances of encountering UXO during the construction of the Line 225 Pipeline Loop.

With the implementation of the mitigation measure described above, this impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. LU-2

Land Use

Impact: **LU-2:** Disruption to Adjacent Properties

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction may cause temporary disturbances or nuisances to nearby residents and businesses or to special land uses. Construction nuisances include noise, light, dust, and traffic delays. Construction in business or residential areas would mainly occur in existing road ROWs. Although installation of the onshore pipelines could cause some inconvenience to some businesses and residences along the route, the contractor would provide temporary access at all times during construction.

Proposed Mitigation

MM LU-2c. Coordinate with Other Utilities.

MM NOI-6a. Post Signs.

MM NOI-6b. Equipment Location.

MM TRANS-1a. Traffic Control Plans.

MM LU-2c would reduce or eliminate temporary nuisances by requiring coordination with other utility service providers to ensure that conflicting maintenance or construction activities are minimized during construction.

MM NOI-6a would require signs with information on the construction schedule and contacts so that nearby receptors could take the construction noise into account in planning their activities and would have contact provided to which concerns could be expressed.

MM NOI-6b would require stationary equipment, such as compressors and welding machines to be located in areas of the construction site away from the residences. This would allow for more noise attenuation over distance, thereby reduce the noise level at the residences.

MM TRANS-1a would require preparation and approval of traffic control plans that detail the location, schedule, signage, and safety procedures for lane and road closures based on final pipeline engineering design. This would ensure continued flow of non-

Project related traffic around the area under construction and would avoid disrupting both access by emergency and other vehicles and would ease congestion by, for example, maintaining two-way traffic, ensuring continued flow of traffic around the area under construction, and allowing continued access to residences, businesses, etc.

With implementation of the mitigation measures described above, this impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. NOI-1

Noise

Impact: **NOI-1:** Noise Generated During the Installation of the Floating Storage and Regasification Unit (FSRU) and Offshore Pipelines

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Noise generated by vessels or equipment during installation of the mooring system, FSRU, and offshore pipelines could result in temporary increases in noise levels in the area, which could impact sensitive noise receptors such as recreational boaters or fishers.

Installation of the FSRU and tie-in to the mooring point would be anticipated to require approximately 24 days total, using 12-hour workdays. Installation of the offshore pipelines is anticipated to require approximately 35 days. Similar vessels and equipment would be used for the construction of the offshore pipelines. The size and horsepower of the equipment that would be used for installation of the FSRU and the subsea pipeline would vary, ranging from 1,500-hp crew boats that would transport workers to 25,000-hp dynamically positioned vessels that would be used to position the pipes directly onto the seafloor.

Noise generated by construction vessels would add to ambient noise in the vicinity of the Project caused by existing vessel traffic. Project construction noise has been designated a Class II impact because of the potential for the project to increase noise by greater than 10 dBA over ambient background noise levels, but only for a temporary and limited period of time.

Project construction noise would be locally concentrated for brief durations of time as construction activities progress seaward along the route of the pipelines. Although no one lives in the area, commercial, fishing, and recreational vessels transit the area regularly. The crews of these vessels could encounter the construction vessels or be passed by a supply vessel and be temporarily impacted by noise from Project-related vessels. Recreational boaters and commercial fishing boats could avoid the project area during construction and thereby limit their exposure to project-related noise; however, should they transit the project area, they would temporarily be exposed to greater noise levels.

Proposed Mitigation

MM NOI-1a, Efficient Equipment Usage,

MM MT-1c. Notices to Mariners

MM NOI-1a would require the operation of equipment on an as-needed basis which would result in fewer pieces of equipment operating simultaneously. The operation of less equipment at any given time would reduce the overall noise level. By using equipment engine covers and mufflers in good working condition, a reduction of up to 20 dBA could be achieved for individual pieces of equipment.

MM MT-1c would notify boaters in advance and warn them of construction so that they could avoid transiting near the construction area, which would further reduce potential noise impacts on non-Project-related marine traffic. With the implementation of the mitigation measures described above, this short-term noise impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. NOI-2

Noise

Impact: **NOI-2:** Long-Term Noise Generated During FSRU Operations

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

The FSRU would use power-generating equipment, pumps, compressors, and other rotating equipment that create noise. Noise levels are typically 50 to 55 dBA in the vicinity of the proposed FSRU. Given this background and the predicted noise from the operation of the FSRU of less than 50 dBA at 3.1 miles (5 km), the operating noise would not normally be distinguishable 3.1 miles (5 km) or more from the unit. However, at a lesser distance from the FSRU, the operating noise may become noticeable and at less than 0.6 mile (1 km) noise level could interfere with normal conversation. Recreational boaters and fishers would be prohibited from the safety zone, but noise impacts during Project operations would occur at levels that exceed the significance criteria outside of the safety zone but within the ATBA.

Proposed Mitigation

MM BioMar-5a, Noise Reduction Design.

The Applicant shall work with marine architects, acoustic experts and mechanical engineers and the USCG, among others, to design the FSRU and its equipment to reduce, to the maximum extent feasible, the output of cumulative noise from the facility. This measure would ensure the use of best practices during design of the facility.

Implementation of this mitigation measure potentially would reduce the intensity and duration of noise generated by the FSRU. This impact would remain potentially significant and unmitigatable, but of short duration and transient in nature because boaters are presumed to be transiting the area.

CEQA Finding No. NOI-3

Noise

Impact: **NOI-3:** Temporary Noise Generated by Support Vessels During Offshore Operations

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

LNG carriers, crew boats and supply vessels, or helicopters could temporarily increase noise levels for sensitive receptors, such as recreational boaters and fishers. Vessels associated with offshore operations can be expected to be heard at a noise level of 90 dBA at 50 feet (15.2 m) away.

Helicopters may be used to access the FSRU; however, the number of trips is not known. Typically, noise from a passing helicopter ranges from 68 to 78 dBA at approximately 1,300 feet (396 m) and is only detectable for 30 seconds.

Project noise could be more than 10 dBA above ambient background noise levels. However, recreational boaters and fishers could easily avoid coming into close proximity to crew boats or supply vessels, and all boaters would be transient.

Proposed Mitigation

No additional mitigation is available to completely reduce this impact.

The frequency of noise-producing events would be limited to daytime hours, but marine traffic transiting near vessels or helicopter traffic associated with the Project would still be subject to a short-term significant impact from the vessel/helicopter noise; therefore, this impact would remain potentially significant after application of all feasible mitigation.

CEQA Finding No. NOI-4

Noise

Impact: **NOI-4:** Temporary Noise Generated During Construction using Horizontal Directional Boring (HDB), Horizontal Directional Drilling (HDD), or Other Drilling Techniques

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

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.

HDB operations would generate relatively high noise levels and would occur 24 hours per day for 108 days for construction at the shore crossing (54 days for each HDB). The proposed shore crossing is located next to the Reliant Energy Ormond Beach Generating Station. The closest residence is approximately 1.1 miles (1.8 km) from the HDB entry point and would be in Ventura County; therefore, Ventura County noise ordinances would apply. The anticipated noise level at this residence would be 60 dBA, which exceeds the Ventura County noise ordinances for all periods of the day; therefore, the noise generated during the HDB installation would represent a short-term significant impact.

Proposed Mitigation

MM NOI-4b, Use Noise Blankets.

MM NOI-4c, Limit Heavy Equipment Activity near Residences.

MM NOI-4d, Cover the Equipment Engine.

MM NOI-4e, Establish Telephone Hotline.

MM NOI-4f, Establish Procedures.

MM NOI-4b would require the use of noise blankets to fully enclose equipment associated with boring where residences occur within 2,000 feet (610 m) and work occurs after 6 p.m. This would reduce noise during nighttime hours and would attenuate the noise to reduce noise at residences and other sensitive receptors.

MM NOI-4c would limit the activity of heavy equipment and would reduce the exposure to vibration for those who might be the most sensitive.

MM NOI-4d would require covering the equipment engine that mufflers are in good working condition. These measures have been used successfully on other projects to reduce engine noise.

Under NOI-4e, in the event that a noise complaint is received from a resident, the noise monitor would evaluate the noise levels and investigate additional mitigation measures that can be employed to reduce the noise level.

MM NOI-4f would establish procedures to stop or curtail drilling/boring or add additional measures to respond to any noise complaints or should any ordinances be exceeded. This would reduce noise disturbance at nearby residences or businesses.

Implementation of the mitigation measures described above would reduce the noise levels to the residence in Ventura County from approximately 60 dBA to 40 dBA; therefore at the HDB location, mitigation would, for the reasons stated, reduce the impact to a level below its significance criteria.

However, residents and businesses closer than 0.5 miles (0.8 km) to boring at stream crossings and street intersections would still be subject to a short-term significant temporary impact from the construction noise that is likely to exceed local noise ordinances.

CEQA Finding No. NOI-5

Noise

Impact: **NOI-5:** Temporary Vibration Generated During Horizontal Directional Boring (HDB), Horizontal Directional Drilling (HDD), and Pipeline Construction Activities

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

HDB, HDD, boring, trenching, and other construction activities could temporarily create vibration levels at sensitive receptors.

Along the proposed Center Road pipeline route, there are 9 residential receptors within 120 feet (37 m) of the potential HDD or boring activity and 15 for the Line 225 Pipeline Loop, which may be subject to vibration impacts. The construction of the pipeline would cause temporary vibration in the immediate vicinity of the construction sites. On-site construction vibration would occur mainly from heavy-duty construction equipment, e.g., trucks, backhoes, excavators, loaders, cranes, and drill rigs. Noise and vibration from on-site construction activities may be intermittent or continuous with a short duration. Mobile equipment, e.g., backhoes, excavators, loaders, and cranes, may operate near a vibration-sensitive receptor along the pipeline route at various times during the construction period. Pipeline construction activities along the proposed Center Road pipeline route would be conducted within 120 feet (37 m) of a residential receptor at three locations and for the Line 225 Pipeline Loop at 52 locations.

Proposed Mitigation

MM NOI-5a, Restricted Work Hours.

MM NOI 4c, Limit Heavy Equipment Activity Near Residences.

MM NOI-5a would restrict construction hours to 7 a.m. to 7 p.m. Monday through Saturday, with the exception of HDB, would reduce the impact of vibration during evening hours and Sundays when most people are engaged in activities that require lower vibration levels.

MM NOI-4c would limit the activity of heavy equipment and would reduce the exposure to vibration for those who might be the most sensitive.

Implementation of the mitigation measures described above would, for the reasons stated, reduce HDD or boring-generated vibration impacts, but not to a level below the significance criteria.

CEQA Finding No. NOI-6

Noise

Impact: **NOI-6:** Noise Generated During Construction of the Onshore Pipeline

Class: I

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

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.

Construction of the onshore pipelines would cause temporary increases in ambient noise levels in the immediate vicinity of the construction sites. On-site construction noise would occur mainly from heavy-duty construction equipment, e.g., trucks, backhoes, excavators, loaders, cranes, and drill rigs. The worst-case noise level for the construction of the onshore pipeline, excluding HDD, would be 98 dBA at 50 feet (15 m). Construction of the onshore pipelines lines would generate noise levels that would have significant impacts.

Proposed Mitigation

MM NOI-6a. Post Signs.

MM NOI-6b. Equipment Location.

MM NOI-4c. Limit Heavy Equipment Activity Near Residences.

MM NOI-4d. Cover The Equipment Engine.

MM NOI-4e. Establish Telephone Hotline.

MM NOI-4f. Establish Procedures.

MM NOI-5a. Restricted Work Hours.

MM NOI-6a would require signs with information on the construction schedule and contacts so that nearby receptors could take the construction noise into account in planning their activities and would have contact to which concerns could be expressed.

MM NOI-6b would require stationary equipment, such as compressors and welding machines to be located in areas of the construction site away from the residences. This would allow for more noise attenuation over distance, thereby reduce the noise level at the residences.

MM NOI-4c would limit the activity of heavy equipment and would reduce the exposure to vibration for those who might be the most sensitive.

MM NOI-4d would require covering the equipment engine that mufflers are in good working condition. These measures have been used successfully on other projects to reduce engine noise.

Under NOI-4e, in the event that a noise complaint is received from a resident, the noise monitor would evaluate the noise levels and investigate additional mitigation measures that can be employed to reduce the noise level.

MM NOI-4f would establish procedures to stop or curtail drilling/boring or add additional measures to respond to any noise complaints or should any ordinances be exceeded. This would reduce noise disturbance at nearby residences or businesses.

MM NOI-5a would restrict construction hours to 7 a.m. to 7 p.m. Monday through Saturday, with the exception of HDB, which would reduce the impact of vibration during evening hours and Sundays when most people are engaged in activities that require lower vibration levels.

Although temporary, noise impacts during construction of the onshore pipeline would potentially exceed noise levels specified in local noise ordinances and would therefore, after the application ao all feasible mitigation, exceed significance criteria.

CEQA Finding No. NOI-8

Noise

Impact: **NOI-8:** Noise Generated During Onshore and Associated Facilities Operations

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Operations of the aboveground facilities may exceed county and/or city noise ordinances or permit conditions for the long-term. There are no known noises that would be generated by operation of the metering station or associated valve facilities. However, noise may be generated during repair or maintenance of the pipeline. These noises would be similar to those generated during construction, but would be temporary and of shorter term.

Proposed Mitigation

MM NOI-4c. Limit Heavy Equipment Near Residences.

MM NOI-4d. Cover the Equipment Engine.

MM NOI-5a. Restricted Work Hours.

MM NOI-4f. Establish Procedures.

MM NOI-6a. Post Signs.

MM NOI-6b. Equipment Location.

MM NOI-4c would limit the activity of heavy equipment and would reduce the exposure to vibration for those who might be the most sensitive.

MM NOI-4d would require covering the equipment engine that mufflers are in good working condition. These measures have been used successfully on other projects to reduce engine noise.

MM NOI-5a would restrict construction hours to 7 a.m. to 7 p.m. Monday through Saturday, with the exception of HDB, would reduce the impact of vibration during evening hours and Sundays when most people are engaged in activities that require lower vibration levels.

MM NOI-4f would establish procedures to stop or curtail drilling/boring or add additional measures to respond to any noise complaints or should any ordinances be exceeded. This would reduce noise disturbance at nearby residences or businesses.

MM NOI-6a would require signs with information on the construction. With the schedule posted along the ROW, individuals living near the Project area could plan noise sensitive activities around the construction schedule.

MM NOI-6b would require stationary equipment, such as compressors and welding machines to be located in areas of the construction site away from the residences. This would allow for more noise attenuation over distance, thereby reduce the noise level at the residences.

With the implementation of the mitigation measures described above, noise impacts during operation of the onshore pipeline and associated aboveground facilities would, for the reasons stated, be reduced to a level below its significance criteria.

In addition, reduction of work hours and the use of heavy equipment during construction near residences and providing procedures for receiving and addressing noise related complaints would reduce onshore operational noise impacts to a level below its significance criteria.

CEQA Finding No. REC-3

Recreation

Impact: **REC-3:** Reduce the Quality of the Offshore Recreational Experience

Class: I

Finding(s): c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

During Project operations, the presence of the FSRU would alter the recreational experience of recreational boaters, including visitors on whale-watching trips and other visitors to the Channel Islands National Park (CINP).

Proposed Mitigation

None.

As discussed under impacts to "Aesthetics" the permanent change in character of the seascape from installation and operation of the FSRU could represent a significant impact. Judging the intensity of the impact with respect to recreational boaters is subjective. Some boaters would not find the FSRU to be a significant adverse impact on their recreational experience because they are accustomed to the large ships traveling nearby in the shipping lanes. However, because some recreational boaters would respond to the change in character of the seascape as a significant adverse impact, this document concludes that these boaters would experience a long-term and permanent change in the character of the offshore recreational resource.

Therefore, the Project would result in a significant impact on offshore recreation for which no feasible mitigation exists.

CEQA Finding No. REC-5

Recreation

Impact: **REC-5:** Reduce or Restrict Access to Parks or Reduce User Enjoyment

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities could temporarily restrict access to parks due to increased traffic congestion or other nuisances in the general area of parks in the vicinity of pipeline construction.

Proposed Mitigation

MM TRANS-1a. Traffic Control Plans.

MM TRANS-1a would require preparation and approval of traffic control plans that detail the location, schedule, signage, and safety procedures for lane and road closures based on final pipeline engineering design. This would ensure continued flow of non-Project related traffic around the area under construction and would avoid disrupting both access by emergency and other vehicles.

The implementation of the above measure would, for the reasons stated, ensure that impacts on traffic due to congestion during construction would not significantly reduce or restrict access to parks.

CEQA Finding No. REC-6

Recreation

Impact: **REC-6:** Reduce or Restrict Access to Trails

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction activities for the Line 225 Pipeline Loop would temporarily close the multi-use trails along the South Fork Santa Clara River.

Proposed Mitigation

MM REC-6a. Trail Closure Signage and Information.

MM REC-6b. Trail Restoration.

MM REC-6a would require posting signs and disseminating information about the temporary closure of the multi-use trail along the South Fork Santa Clara River which would allow recreationists to make alternative plans during the construction period.

MM REC-6b would require restoration of the trail within 21 days after completion of construction so that recreational uses could be resumed.

With implementation of the above mitigation measures, disruption of the multi-use trail would be minimized, the trail would be restored in a timely manner, and the impact would be reduced to a level below its significance criteria.

CEQA Finding No. TRANS-1

Transportation

Impact: **TRANS-1:** Temporary Increase in Traffic

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

During construction, the addition of the construction-related workforce and material deliveries to and from staging areas could temporarily increase traffic during peak construction periods.

Proposed Mitigation

MM TRANS-1a. Traffic Control Plans.

MM TRANS-1b. Notification, Schedule Shifts.

MM TRANS-1a would require preparation and approval of traffic control plans that detail the location, schedule, signage, and safety procedures for lane and road closures based on final pipeline engineering design. This would ensure continued flow of non-Project related traffic around the area under construction and would avoid disrupting both access by emergency and other vehicles and would ease congestion by, for example, maintaining two-way traffic, ensuring continued flow of traffic around the area under construction, and allowing continued access to residences, businesses, etc.

MM TRANS-1b would require implementation of shall implement best management practices approved by CalTrans and/or the affected local government, such as notification, schedule shifts, and carpooling to reduce the number of construction related trips and minimize increases in traffic.

With implementation of the mitigation measures described above, the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. TRANS-2

Transportation

Impact: **TRANS-2:** Temporary Traffic Lane Closures

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

The Project could restrict one or more lanes of major roads, disrupting local traffic flow during peak hours.

Proposed Mitigation

MM TRANS-1a. Traffic Control Plans.

MM TRANS-1a would require preparation and approval of traffic control plans that detail the location, schedule, signage, and safety procedures for lane and road closures based on final pipeline engineering design. This would ensure continued flow of non-Project related traffic around the area under construction and would avoid disrupting both access by emergency and other vehicles and would ease congestion by, for example, maintaining two-way traffic, ensuring continued flow of traffic around the area under construction, and allowing continued access to residences, businesses, etc.

With the implementation of this mitigation measure described above, the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. TRANS-4

Transportation

Impact: **TRANS-4:** Temporary Closure of Bike Routes

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Construction could result in temporary closure and/or restricted access to bike paths crossed by the onshore pipelines, which could adversely affect the safety of bicyclists.

Proposed Mitigation

MM TRANS-4a. Bike Detour Lanes.

MM TRANS-4b. Repair Damage to Bike Paths.

MM TRANS-1a. Traffic Control Plans.

MM TRANS-4a would require appropriate restoration, signage, and timely dissemination of information about the trail closures, which would lessen impacts on bicyclists and would enable ongoing use of a bike path during construction.

MM TRANS-4b would require prompt repair of bike paths, which would allow bikers to resume using them soon after construction ceases.

MM TRANS-1a would require preparation and approval of traffic control plans that detail the location, schedule, signage, and safety procedures for lane and road closures based on final pipeline engineering design. This would ensure continued flow of non-Project related traffic around the area under construction and would avoid disrupting both access by emergency and other vehicles and would ease congestion by, for example, maintaining two-way traffic, ensuring continued flow of traffic around the area under construction, and allowing continued access to residences, and businesses.

.With the implementation of the mitigation measures described above, the impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. TRANS-5

Transportation

Impact: **TRANS-5:** Damage to Roads During Construction

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

Roads crossed or paralleled by the onshore pipelines, as well as those used to access the Project, could be temporarily damaged by increased traffic and heavy equipment.

Proposed Mitigation

MM TRANS-5a. Repair Damage to Roads.

MMTRANS-5a stipulates that any damage to roads would be repaired as soon as feasible following construction within the roadways and in no case would the road be in disrepair for more than 21 days.

Therefore, the effects would be temporary and of a relatively short duration and implementation of the mitigation measure described above, would, for the reasons stated, reduce the impact to a level below its significance criteria.

CEQA Finding No. WAT-3

Water Quality and Sediments

Impact: **WAT-3:** Short-Term Degradation of Surface Water or Groundwater Quality due to Accidental Release of Drilling Fluids

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

The Project would include shore crossing via HDB. The HDB boring process uses drilling fluid to run the bore motor in the bore head to cut through the earth material, to seal off fractures in the formation, and to lubricate the bore pipe during installation. The drilling fluid is pumped down the inside of the bore pipe and exits through the bore head. Under normal operations, drilling fluids would remain in the HDB boreholes. Drilling fluids from drilling equipment include oils, hydraulic fluid, and drilling fluids (bentonite slurry). If cracks or fissures in the subsurface are encountered during drilling, drilling fluids can travel along them to the groundwater and enter adjacent surface water bodies. Releases of drilling fluids or inadvertent return of drilling fluids such as bentonite could temporarily reduce water quality where released.

Proposed Mitigation

MM WAT-3a. Drilling Fluid Release Monitoring Plan.

MM WAT-3a would require a plan to minimize the potential for releases of drilling fluids and require drilling fluids to be properly cleaned up and appropriate agencies notified should a release occur. The plan would incorporate best management practices that have been proven in other projects to reduce the impacts from releases of drilling fluids.

With the implementation of the mitigation measure described above, this impact would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. WAT-4

Water Quality and Sediments

Impact: **WAT-4:** Short-Term Increase in Erosion due to Construction Activities

Class: II

Finding(s): a) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

During construction, the movement of equipment and materials could destabilize the soil surface and increase erosion potential from water and wind along the route and in the staging areas. Construction activities and loss of vegetation could cause accelerated erosion on steep slopes and in erosion-susceptible soils. Also, construction activities could cause erosion before vegetation is re-established. Any of these scenarios could lead to potential sedimentation of nearby creeks and drainages.

The proposed pipelines would cross several streams. During construction, slick bore, case bore, and trenching activities and the excavation of drilling pits could lead to sedimentation of stream channels where water is flowing. This could increase turbidity in those streams to levels above water quality standards. Trenching would likely cause the greatest increase in turbidity.

Proposed Mitigation

MM WAT-4a. Strategic Location for Drilling Fluids and Cuttings Pit.

MM WAT-4b. Transport Excess Trench Spoils Offsite.

MM WAT-4c. Monitor Stream Crossing Construction.

MM GEO-1b. Backfilling, Compacting and Grading.

MM WAT-4a would ensure that drill cuttings and fluids would be contained in pit so that they do not enter water bodies.

MM WAT-4b would ensure that excess trench spoils are disposed of properly.

MM WAT-4c would ensure that the Applicant or its designated representative is adhering to all legal requirements and mitigation measures.

MM GEO-1b would decrease the potential that storm events could cause erosion where the pipelines were installed.

With the implementation of the mitigation measures described above that are designed to alleviate soil erosion during and after construction, the potential erosion impacts associated with the Project would, for the reasons stated, be reduced to a level below its significance criteria.

CEQA Finding No. WAT-5b

Water Quality and Sediments

Impact: **WAT-5b:** Degradation of Water Quality due to an Accidental Release of Diesel Fuel from the FSRU, Pipelaying Vessel, or Service Vessels.

Class: I

Finding(s): c) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Facts Supporting the Finding(s)

Description of the Impact

The FSRU would store up to 264,000 gallons (1,000 m3) of diesel fuel in USDOT-approved containers within secondary containment. A worst case scenario at the FSRU involves the accidental release of the entire contents of the diesel fuel storage tank to the ocean over a one-hour period under adverse weather conditions with no cleanup response. Under this scenario, the trajectory analyses show that oil could reach the coastline on the mainland from Carpinteria south to Point Fermin near San Pedro after approximately 72 hours, and under Santa Ana wind conditions, the shorelines of Anacapa, Santa Cruz, and Santa Rosa Islands. The Applicant's spill analysis concludes that if the appropriate and effective use of oil spill response equipment, as outlined in the USCG-approved Facility Response Plan, is implemented, it is unlikely that oil would reach the shore.

If there were an accidental release of diesel fuel, it would be more likely to occur during the replenishment of the FSRU's diesel supply when supply vessels transfer approximately 350-gallon (1.3 m3) capacity containers to the FSRU. If a container's integrity were damaged during the transfer and a portion or all of its total volume were released, the volume of such release would be relatively small, and its release would activate the Facility Oil Pollution Contingency Plan.

The worst case scenario during construction involves a vessel carrying 1,500 m^3 (396,258 gallons) of fuel losing 25 percent (375 m3 or 99,065 gallons) of its fuel. The trajectory analyses for the 72-hour spill scenario estimates four cases with variable currents and wind directions, in which there is no oil spill response (containment or skimming). The trajectory analyses show potential for oiling coastline on the mainland from approximately Isla Vista and Santa Barbara south to Point Fermin near Los Angeles Harbor. A case with a westerly current presents potential for oiling the shorelines of Anacapa and Santa Cruz Islands. A case with reinforcing wind and currents to the west also presents the potential for oiling the shorelines of Santa Rosa and San Miguel Islands. Due to the lack of southerly flowing offshore currents, the spill analysis shows no trajectories that could transport oil to Santa Catalina or Santa

Barbara Islands. When oil spill response with available oil skimming capacity is considered, the extent of shoreline that could be oiled is significantly reduced

Proposed Mitigation

None.

An accidental release of diesel fuel to marine waters of any size would violate Federal and State water quality standards or objectives. Even with the implementation of the Facility Oil Pollution Contingency Plan for the FSRU or the Vessel Oil Pollution Contingency Plan for the pipelaying vessel, impacts on water quality from an accidental release of diesel fuel would remain potentially significant after the application, within such plans, of all feasible mitigation.

1.4.4 MITIGATION MEASURES NOT ADOPTED/REJECTED

Most of the mitigation measures recommended by the public were incorporated into the Final EIR; however, the following mitigation measures recommended in comments on the EIR were not incorporated either: (1) because they are inappropriate, or (2) rejected as infeasible due to specific economic, technological, legal or other considerations.

A mitigation measure may be rejected as infeasible if it is "(in) capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors" Public Resources Code Section 21061.1. Legal or other factors, such as providing employment opportunities, may also be considered in making a finding of infeasibility. See Public Resources Codes Section 21081; see also State CEQA Guidelines Section 15091 (a) (3).

4.2 Public Safety

Mitigation Measure A

Extend the exclusion zone or the area to be avoided (ATBA) to encompass the maximum hazard zone.

The sizes of the safety zone (the correct terminology for exclusion zone) and the ATBA are governed by Federal and international law and are independent of any analysis of hazards.

The Applicant applied to the USCG for the establishment of a safety zone around the FSRU and has requested that an ATBA be established in addition to the safety zone. The FSRU would be able to rotate 360 degrees around the mooring turret. The safety zone would extend 500 m from the circle formed by the FSRU's stern, the outer edge of the facility, rotating around the mooring turret. The safety zone could not unilaterally be made any larger because its size is governed by international law. According to the United Nations Convention on the Law of the Sea and the Continental Shelf Act of 1964 (No. 28 of 3 November 1964, as amended by the Continental Shelf Act Amendment Act, No. 17 of 14 November 1977), a safety zone can only extend to 0.27 NM (0.3 mile or 0.5 km) as "measured from each point of the outer edge of the installation or device, around any such installations or devices in, on, or above the continental shelf." It would be difficult if not impossible to change the Convention within a reasonable period of time.

The ATBA, a larger circle that would surround the safety zone, would likely extend to 2 NM (2.3 miles or 3.7 km) from the stern of the FSRU; however, the actual size of the ATBA would be established through the advice and consent of the Office of Vessel Traffic Management of the USCG. By law, the ATBA could not extend into the coastwise traffic lanes. Figure 4.3-4 of the Final EIR illustrates the potential safety zone and area to be avoided. The ATBA is considered by the USCG to be a recommendatory routing measure. A vessel transiting the ATBA would be requested to restrict its speed to no more than 10 knots (19 km/hour) and to check in and out with the

Cabrillo Port vessel operations manager. The USCG would submit a written request to the IMO to establish the ATBA, and the IMO would present the request to its Maritime Navigation Safety Committee. If approved, the ATBA would be implemented within one year from the time of submittal and would appear thereafter on maritime charts published by IMO member nations, including those charts published by NOAA.

The suggested mitigation measure was not adopted because it is not feasible under existing law, and changing the law to enable the implementation of the mitigation measure could not be accomplished within a reasonable time period.

Mitigation Measure B

Move the FSRU further offshore so that it is at least 7.3 miles, the maximum credible extent of a potential natural gas vapor cloud developing as a consequence of a release of LNG from the FSRU, from the edge of the shipping lanes.

With respect to relocating the FSRU as mitigation, insufficient technical information is available to: (1) establish that such relocation is feasible within the meaning of section 15364 of the State CEQA Guidelines; or (2) determine pursuant to the requirements of section 15126.4(a) (1)(D) of the State CEQA Guidelines, whether such mitigation "...would cause one or more significant effects in addition to those that would be caused by the project as proposed..."

Moving the FSRU could result in greater potential conflicts with the Point Mugu Sea Range or closer proximity to the Channel Islands. In addition, geotechnical/seismic hazard reports and preliminary geotechnical studies comparable to those conducted for the proposed FSRU and routes of the offshore pipelines would be needed to evaluate geotechnical and seismic hazards. For example, Alternative Offshore Pipeline Route 1 was eliminated from further consideration because seismic design analysis and review indicated that there was greater potential for turbidity flows along this pipeline route. As another example, information regarding potential historic resources such as shipwrecks or the presence of hard bottom habitat that would be revealed by geophysical surveys is not available. The offshore pipelines would also be longer, which could potentially result in greater environmental impacts, and would result in considerable additional expense.

As discussed in Section 4.2.7.6 of the Final EIR, a vapor cloud fire could occur if released LNG were to evaporate and disperse downwind before encountering an ignition source. Unlike a pool fire, the entire cloud does not ignite at once and may burn back to the source of the release. The Independent Risk Assessment (IRA) determined that the greatest distance from the FSRU within which public impacts would occur is 6.3 NM (7.3 miles or 11.7 km), which would result from the intentional breach of two Moss tanks. This hazard distance encompasses the TSS shipping lanes, but extends no closer than 5.71 NM from the nearest mainland landfall.

Detailed technical, engineering, and environmental information does not exist to evaluate potentially significant effects of relocating the FSRU, and subsequently determine whether the measure is feasible and whether it would cause one or more significant effects in addition to those caused by the proposed Project. Therefore, the mitigation is not adopted.

4.3 Marine Traffic

Use U.S. crews on all LNG carriers calling at the FSRU for safety and security reasons.

Under the Deepwater Port Act, the Maritime Administration (MARAD) and the USCG are responsible for ensuring that LNG imported through Deepwater Port Act-licensed facilities into the U.S. are accommodated safely and securely as part of the ongoing balance of national security and energy security interests with environmental and safety concerns. In addition to other training requirements, all marine personnel must have IMO11 mandated Standards of Training, Certification and Watchkeeping (STCW) training and certification as applicable to LNG carriers in international trade. Training requirements apply equally to U.S. and foreign-flagged vessels and crews.

On July 12, 2006, the Coast Guard and Maritime Transportation Act of 2006 (H.R. 889) was passed into law. The Act states that the plan submitted with the deepwater port application must include the nation of registry for, and the nationality or citizenship of officers and crew serving on board LNG carrier vessels that are reasonably anticipated to be servicing the DWP.

While MARAD encourages the use of U.S. crews for LNG vessels calling at U.S. deepwater ports, it cannot at present legally require this. Therefore, because it is not legally enforceable, this mitigation is not adopted.

Section 4.6 Air Resources

Mitigation Measure A

Reduce emissions of diesel particulate matter by using alternative clean fuel technology such as electric or compressed natural gas-powered construction equipment with oxidation catalysts instead of gasoline- or diesel-powered engines. Alternatively, reduce particulate matter emissions by using construction equipment fitted with diesel particulate filters.

This mitigation is not included in Section 4.6 of the Final EIR because the Applicant would use onshore construction equipment compliant with USEPA Tier 2, 3, or 4 nonroad engine standards. Further, MM AIR-1e would require that all onshore construction equipment with a rating between 100 and 750 hp utilize engines compliant with USEPA Tier 3 nonroad engine standards. USEPA's Tier 2, 3, and 4 nonroad engine standards include more stringent emission standards for particulate matter from diesel engines. Therefore, the measure is not adopted because it duplicates already recommended mitigation.

Mitigation Measure B

Require that the natural gas imported by the proposed Project complies with the South Coast Air Quality Management District's 1360 Wobbe Index.

As indicated in Section 4.6.2 of the Final EIR, the natural gas imported by the proposed Project would need to meet the requirements of Rule 30 and General Order 58-A of the California Public Utilities Commission (CPUC). Rule 30, as described, has specific requirements, including a heating value range. The quality of natural gas distributed in Southern California from the Project would be subject to a tariff agreement negotiated between the Applicant and the Southern California Gas Company (SoCalGas). Tariff agreements, and the pipeline-quality gas specifications contained within, must be approved by the CPUC to ensure public health and safety for end-users and protection of the environment (particularly air quality).

Several factors relating to the natural gas to be delivered by the Applicant are not known at this time: (1) the precise heat content of the natural gas to be imported, other than it will meet the then existing standards, as described above, for such imports; (2) the sector of SoCalGas's market to which the gas will be diverted, e.g., there is no known, dedicated end user or designated sector for the supply (although BHPB states that 18 entities representing a range of natural purchasers have executed letters of interest regarding the possible purchase of natural gas from the Project) (3) the character of the natural gas with which the gas received from the Applicant may be blended within the SoCalGas distribution system and the resultant heat content of such blend; and (4) whether the gas will be consumed within the South Coast Air Basin. While the potential exists for changes in NOx emissions due to the burning of natural gas with higher heating values than that acceptable to the South Coast Air Quality Management District, i.e., 1,360 on the Wobbe Index, it would be speculative, based on the above factors, to determine that such would be the case and to subsequently attempt to quantify any related changes in emission levels within the South Coast Air Basin.

In addition, an analysis of the impacts of the CPUC rulemaking is beyond the scope of the requirements of the CEQA and information adequate to further evaluate this proposed mitigation measure is not available.

Therefore, this mitigation is not adopted.

4.8 Terrestrial biological resources

Prohibit salvage of soil in weedy areas and limit salvage to areas where there is a natural seed bank.

AM TerrBio-4a provides for weed management and includes salvage and replacement of topsoil wherever the pipeline is trenched through open land. Any changes in the weed management program would be made in consultation with Federal, State and local agencies. As discussed in Section 4.13.3 of the Final EIR, approximately 90

percent of the lands adjoining the proposed Center Road Pipeline route are in agricultural use; in residential and business areas, the ROW would be located in existing streets or other ROW in accordance with the franchise agreement.

The suggested mitigation measure is duplicative of already recommended mitigation. In addition, insufficient information is available to determine whether the mitigation measure would cause one or more significant effects in addition to those that would be caused by the Project as proposed. Limiting areas of salvage to areas where there is a natural seed bank could result in the removal of topsoil that would in turn create other potentially significant impacts such as reduction of soil productivity or soil erosion.

Therefore, the mitigation is not adopted.

1.5 FINDINGS FOR ALTERNATIVES

The detailed evaluation of a potential alternative to the proposed Project by the USCG, MARAD, and CSLC is based on reasonableness. According to the Deepwater Port Act, the California Environmental Quality Act (CEQA), and the State CEQA Guidelines (California Code of Regulations, Title 14, 15000 et seq.) and its implementation regulations, governmental decision-makers must consider reasonable alternatives when a proposed action could result in significant environmental effects. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would:

- Satisfy most of a project's basic objectives, including its purpose and need;
- Avoid or substantially lessen one or more of a project's significant effects; and
- Be feasible.

"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors (California Public Resources Code § 21061.1).

Seven alternatives were considered reasonable and evaluated in the EIS/EIR:

- Santa Barbara Channel/Mandalay/Gonzales Road Deepwater Port Alternative;
- Center Road Pipeline Alternative 1;
- Center Road Pipeline Alternative 2;
- Center Road Pipeline Alternative 3;
- Line 225 Pipeline Loop Alternative;
- Point Mugu/Casper Road Pipeline Alternative; and
- Arnold Road Shore Crossing/Arnold Road Pipeline Alternative.

Three alternative sources of energy to take the place of natural gas were considered but not evaluated as reasonable alternatives to the proposed Project:

- Energy Conservation Alternative;
- Renewable Energy Sources Alternative; and
- **RETROFITTING EXISTING POWER PLANTS ALTERNATIVE.**

An additional means to transport additional natural gas to California was examined, but not evaluated as a reasonable alternative to the proposed Project.

- New or Expanded Pipeline Systems.

Eighteen terminal alternative locations were considered but not evaluated as reasonable alternatives. Offshore regions considered were: Washington/Northern Oregon, Southern Oregon/Northern California, San Francisco Bay to Point Conception,

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and Los Angeles to the Mexican border. Specific offshore locations considered included: Northern Baja Mexico, Gaviota Pass, Camp Pendleton, Deer Canyon, Anacapa Island, Chinese Harbor, Smugglers Cove, San Pedro Point, West side of the Channel Islands. Onshore locations included: Horno Canyon at Camp Pendleton, Rattlesnake Canyon, Little Cojo at Point Conception, Deer Canyon, and the Channel Islands.

Four alternative deepwater port concepts were considered but not evaluated as reasonable alternatives to the proposed Project:

- Single-point mooring direct regasification floating facility;
- Multiple-point mooring direct regasification floating facility;
- Fixed platform; and
- Fixed platform with a gravity-based structure.

The following discussion presents the findings for alternatives both eliminated from analysis and alternatives evaluated in the Final EIR.

1.5.1 FINDINGS ON ALTERNATIVES ELIMINATED FROM DETAILED ANALYSIS IN THE FINAL EIR

The following findings describe the potential alternatives that were determined not to be reasonable alternatives according to the criteria listed in Section 1.5. Accordingly, these alternatives were not evaluated in detail in the Final EIR.

FINDING FOR ENERGY CONSERVATION ALTERNATIVE

Description: This alternative considered increasing energy conservation and efficiency measures as a means of meeting the California's natural gas and energy needs.

Finding(s): The use of energy conservation and efficiency or a combination thereof, to meet California's energy needs is considered inadequate, speculative and an infeasible alternative to meet California's increasing demands for replace the energy in the short- and mid-term. In addition, energy conservation and efficiency would not accomplish most of the Project objectives, which include supplying energy in the form of natural gas and diversifying the State's supply of natural gas.

Facts Supporting the Finding(s)

Energy conservation measures were considered but not evaluated as a reasonable alternative because they are ongoing activities that would occur regardless of whether or not the proposed Project proceeds. In addition, energy conservation measures are already factored into California's energy supply and demand analyses, which conclude that additional supplies of natural gas are necessary, after full consideration of the

projected contributions of energy conservation, to meet California's projected energy demands. Denial of the Project would not reduce the amount of natural gas required to meet projected State needs.

The State of California is actively working to decrease its per capita use of electricity through increased energy conservation and efficiency measures. Energy conservation measures include actions such as improving new and remodeled building efficiency, improving air conditioner efficiency and appliances, and creating customer incentives to reduce energy demand. According to the State of California's Energy Action Plan II: Implementation Roadmap for Energy Policies, cost effective energy efficiency is the State of California's first choice for meeting California's energy needs because it represents the least costly, most reliable, and most environmentally sensitive resource, and minimizes California's contribution to climate change. California's energy efficiency programs are the most successful in the nation and the State wants to continue to build upon them.

In addition, the CPUC has established an ongoing rulemaking, R.01-08-028, Order Instituting Rulemaking to Examine the Commission's Future Energy Efficiency Policies, Administration and Programs. CPUC Decision D.04-09-060, Interim Opinion: Energy Savings Goals for Program Year 2006 and Beyond defines and establishes an energy efficiency program with policies and goals for electricity and natural gas savings with planned updates of these goals every three years. It also translates the Energy Action Plan's mandates into explicit, numerical electricity and natural gas savings goals for California's four largest investor-owned utilities.

Statewide investor-owned utilities (IOUs) programs, such as Single and Multi-Family Energy Efficiency Rebates, Residential Appliance Recycling, CA Energy Star New Homes, and Savings by Design, are responsible for most of the energy savings and peak impacts from conservation and efficiency. CPUC policy requires the major California IOUs to implement all cost-effective energy efficiency. Future cost-effective energy efficiency is first assumed to be implemented before the IOUs complete demand calculations and determine what generation resources are needed to meet additional demand. According to the CEC, although increases in conservation, efficiency, and use of renewable energy sources are expected to moderate future demand, the policies and mandates in place do not suggest that incorporating conservation, energy efficiency, and the use of renewable energy resources will meet all future IOU portfolio needs.

The Energy Action Plan II, prepared by the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC), expressly acknowledges, in full consideration of energy conservation data and programs, the need to ensure a reliable supply of reasonably priced natural gas. Even taking into account increased conservation measures, natural gas demand is expected to increase by about 0.7 percent annually, from 2006 to 2016, according to the CEC's 2005 Integrated Energy Policy Report Committee Final Report. The CEC's energy demand forecasting models quantify and incorporate conservation and energy efficiency contributions, including the mandatory building and appliance standard upgrades and demand reductions from customer response to energy price increases. Conservation and energy efficiency that

is reasonably expected to occur is incorporated into the CEC models, as statutorily required. Therefore, additional natural gas would be needed in California despite energy conservation and efficiency measures.

Although some energy conservation measures can be implemented in the short- and mid-term, many measures to improve energy conservation address long-term energy policy and usage considerations. For example, a measure such as changing the energy efficiency requirements for a building requires a considerable amount of time to implement. Older buildings will be grandfathered; therefore, they will not implement the new building codes. It will take time for new building stock to be built to the new standards to replace older buildings. Similarly, once energy efficiency standards are adopted for appliances, a phase-in period is required as the new appliances are purchased and the old, less energy-efficient appliances continue to be used until the end of their economic lives. These types of energy efficiency improvement strategies and policies are necessarily long-term. Even assuming increased conservation would occur, additional natural gas supplies would be required according to the CEC and the CPUC projections.

The CSLC does not have authority to initiate or implement additional broad-based, long-term energy conservation policy measures beyond those previously described. It also does not have control over whether such measures will be proposed, approved, and implemented, or the time frame over which these actions might occur. Nonetheless, the agency's actions could impact the State's energy supply mix. Any decision by the government to increase subsidies or otherwise promote additional conservation would be independent of actions taken on this DWP application by the CSLC.

Energy conservation is, therefore, not a reasonable alternative to the Project and is not evaluated as such in the Final EIR. Energy conservation is discussed, however, as part of the baseline energy conditions for the proposed Project in Section 4.10.1, "Energy and Minerals – Environmental Setting." Section 4.10.1.3 of the Final EIR contains an additional discussion of the California Energy Action Plan.

FINDING FOR RENEWABLE ENERGY SOURCES ALTERNATIVE

Description: This alternative considered the increased availability and use of renewable energy sources such solar, wind, geothermal, and hydropower as a means of replacing California's need for natural gas.

Finding(s): The use of renewables to meet California's energy needs is considered inadequate, speculative, and an infeasible alternative to meet California's increasing energy demands in the short- and mid-term. These options are not considered to be potentially feasible alternatives to the proposed Project. In addition, renewable energy sources would not accomplish most of the Project objectives, which include supplying energy in the form of natural gas and diversifying the State's supply of natural gas.

Facts Supporting the Finding(s)

Similar to energy conservation, renewable energy is not evaluated as a reasonable alternative to the proposed Project because such sources are already factored into California's energy supply and demand analyses, which conclude that additional supplies of natural gas are necessary, after full consideration of the projected contributions of renewable sources, to meet California's projected energy demands. Renewable sources include solar, wind, geothermal, hydropower, and others. Any decision by the government to increase subsidies or otherwise promote renewables would be independent of actions taken on this DWP application.

The State of California already has legislated aggressive programs to increase the quantity of electricity generated from renewable energy sources to 20 percent, from the current 11 percent, by 2017. Senate Bill 107, passed in 2006 and it addresses public interest energy research, demonstration, and development program for renewable energy and requires retail electricity sellers to meet the 20 percent renewables requirement by 2010 instead of 2017. In the recently published Energy Action Plan II, the State's objective is to accelerate its goal of generating 20 percent of its electricity from renewables from 2017 to 2010 and to generate 33 percent of the State's electricity with renewables by 2020.

A component of State policy is to diversify the electricity system with renewables, partly in response to growing natural gas dependence. The CEC has recommended that California diversify its natural gas supply because the State relies on out-of-state sources for 87 percent of its natural gas supplies, and neighboring states are increasing their demand for supplies. However, administrative procedures have hindered the State's goals to meet its renewable energy goals. Lawrence Berkeley National Laboratory notes that one of the reasons renewables have come on line more slowly than expected in California is that California's Renewables Portfolio Standard Program, established by Senate Bill 1078 in 2002, is unique in its design and complexity as compared to similar programs across the country. Further, a study commissioned by the CEC indicates that some signed renewable energy contracts nationwide do not result in operating facilities. The rate of contract failure is conservatively between 20 and 30 percent. Contract failure is a significant factor in renewable procurement strategies and may contribute to missing State renewable targets.

California's natural gas demand growth is expected to be slower than the rest of the nation's due to the State's energy efficiency programs and the use of renewable energy for electricity generation. Nevertheless, total natural gas demand in California is projected to increase by 0.7 percent per year from 2006 to 2016. The CEC's energy forecasting model assumes that California's large IOUs and suppliers from other Western states will meet their Renewable Portable Standards obligations. Renewable energy is also factored into future capacity expansion calculations throughout the Western U.S., which forecast how much natural gas-fired generation, and therefore natural gas supply, will be needed for Western power plants, annually. The minimum Renewable Portfolio Standard is an annual procurement target for each of California's major IOUs that increases by at least 1 percent each year until it reaches a statutory

maximum of 20 percent (with a three-year flexible compliance rule for meeting this target). Thus, the CEC's projections of future energy demand incorporate the growing use of renewable sources and still conclude that the need for natural gas will increase.

California's major investor owned utilities have signed contracts for 1,700 to 3,000 megawatts of renewable capacity since 2002, and PG&E made its fourth solicitation on June 29, 2006, asking suppliers to provide bids for renewable energy. California's use of renewable energy has increased by 1 percent of the State's total electricity use in the last four years despite statewide support for enhanced use of renewable energy.

Southern California Edison (SCE) is the major power producer in the Southern California region. SCE procures more than 13 million megawatt-hours of renewable energy per year. Its renewable portfolio can deliver more than 2,700 megawatts (MW) of electricity, including 1,021 MW from wind, 892 MW from geothermal, 354 MW from solar, 221 MW from biomass, and 128 MW from SCE-owned small hydroelectric. In November 2006, SCE signed and will submit to the CPUC seven new long-term contracts with renewable energy power generators for up to 324 MW of clean power.

Seven wind projects are planned and proposed in Southern California. The projected energy from the planned and proposed wind projects is 673 MW. The power would be generated for seven utilities in the Southern California area. The new and existing wind projects are spread throughout California.

In addition to wind energy projects, solar energy projects are planned or in place. In August 2005, SCE announced that it would develop, in conjunction with Stirling Energy, a 4,500-acre (1,820 hectare) solar facility near Victorville, California that would initially produce 500 MW. Approvals are still necessary before construction is to begin, but it is anticipated that 40 dishes that would generate 1 MW will be in place by the end of 2006. The operators plan to generate 50 MW by 2008 and 500 MW by 2011. In September 2005, Stirling Energy Systems announced that it would provide San Diego Gas and Electric with between 300 and 900 MW of solar power from a solar facility that would be located in the Imperial Valley. The contract is subject to CPUC approval.

The projects listed above demonstrate that renewable energy sources are being developed independently of the proposed Project. The CEC's projections of future natural gas supply needs for the State include the assumption that renewable energy projects will be implemented, yet still conclude that additional natural gas supplies are necessary.

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."

The CSLC does not have authority to initiate or implement additional new broad-based policies to promote the expanded use of renewable energy resources beyond what is already anticipated under the State's existing aggressive program. Nonetheless, the agency's actions with respect to the proposed Project could impact the State's energy supply mix and might indirectly affect energy costs. Based on all information presently available, it does not appear that Project approval would modify the role of renewable sources in the State's energy supply mix; however, denial of the proposed Project would not reduce the amount of natural gas required to meet the State's projected needs.

Therefore, renewable energy is not evaluated as an alternative to the proposed Project in the EIS/EIR because such measures would not eliminate the need for both short- and mid-term supplies of additional natural gas, which is the Project's proposed purpose pursuant to the provisions of the Deepwater Port Act. In addition, increased use of energy from renewable sources would occur with or without the proposed Project and use of additional renewable sources beyond the State's existing mandates is not within the control of the lead agencies.

FINDING FOR RETROFITTING EXISTING POWER PLANTS ALTERNATIVE

Description: This alternative considered the retrofitting existing power plants through the installation of more efficient natural gas-fired turbines at existing natural gas-fired electricity generation plants as a means to meet California's natural gas and energy needs.

Finding(s): Retrofitting existing power plants would not accomplish most of the Project objectives, which include supplying energy in the form of natural gas and diversifying the State's supply of natural gas. Further, the State's determination of the need for additional natural gas supplies takes into account the re-powering of existing power plants and still concludes that new gas supplies are needed.

Facts Supporting the Finding(s)

The installation of more efficient natural gas-fired turbines at existing natural gas-fired electricity generation plants ("turbine re-powering") was considered but not evaluated as a reasonable alternative for further analysis in the Final EIR for several reasons: (1) the CEC has determined that the State's natural gas supply must be increased whether or not turbine re-powering occurs; and (2) the proposed turbine re-powering would occur at locations and power plants over which the CSLC has no jurisdiction and that the Applicant for the proposed Cabrillo Port Project does not own, control, or have the experience or expertise to operate.

The re-powering of natural gas-fired power plants is being driven by economic and environmental factors not directly related to natural gas supply, i.e., primarily the inefficiency of operating these older power plants and the cost of complying with air

quality regulations. The turbine re-powering alternative is moving forward and would not be affected by a decision on the proposed Project.

The main agency with jurisdiction over the operation of existing natural gas power plants in California is the CEC, which has recently approved or is considering approval of several turbine re-powering projects. The State of California's 2005 Energy Action Plan II indicates that despite energy-efficient renewable resources, other energy sources, and investments in conventional power plants such as augmenting existing facilities and replacing aging infrastructure, there is no indication that the need to increase California's short-term natural gas supplies can be averted through turbine re-powering. The State's determination of the need for additional natural gas supplies takes into account the re-powering of existing power plants and still concludes that new gas supplies are needed. In sum, there is no indication that proposed turbine re-powering would avert the need to increase California's short-term and mid-term natural gas supplies.

FINDING(S) FOR NEW OR EXPANDED PIPELINE SYSTEMS ALTERNATIVE

Description: This alternative considered the building of new pipelines or the expanding existing natural gas pipeline system to supply natural gas from domestic sources as a means to meet California's natural gas and energy needs.

Finding(s): Expanding pipeline systems would not accomplish a key Project objective, which is to diversify the State's supply of natural gas. Further, construction of new or expanded pipeline systems would have environmental consequences along whatever corridors were proposed.

Facts Supporting the Finding(s)

California receives approximately 87 percent of its natural gas supply from other states and western Canada via gas transmission pipelines. Since 2000, California has imported approximately 5.5 billion cubic feet (156 million cubic meters [m^3]) per day of natural gas. During the same time, U.S. production of gas has flattened. In-state supplies are limited, and the supplies are allocated. Of the 989 million cubic feet (MMcf) (28 million m^3) per day produced in California in 1999, only 48 percent was delivered by natural gas utilities. The remainder was either consumed at or near the point of production or delivered for use by a nonutility pipeline network. In addition, within California an expansion of the existing intrastate network is unlikely because supplies in these fields are diminishing. Expansion of the interstate pipeline network, such as the conversion, by El Paso Natural Gas Company, of approximately 304 miles (489.2 kilometers [km]) of an existing oil pipeline (All American Pipeline) to natural gas service could temporarily increase the delivered volumes of gas to or from the State, but it would not increase the diversity of the natural gas supply.

Construction of a new gas pipeline would most likely involve disruptive activities through the desert. The Kern River 2003 Expansion Project EIS/EIR states that construction

would cause long-term consequences for vegetation and wildlife habitat, which would be removed during construction, as well as potential impacts on threatened and endangered species endemic to the desert, such as the desert tortoise. Although construction of a new pipeline would increase supply and potentially add to the supply from the Rocky Mountains, depending on the source of the natural gas, it would shift the potential environmental impacts from one project to another.

Expanded pipeline systems would not meet the Project objective of increasing the diversity of natural gas supplies to California. In addition, construction of new or expanded pipeline systems would have environmental consequences along whatever corridors were proposed. Therefore, new or expanded pipeline systems were not considered as reasonable alternative sources to natural gas to be supplied by the proposed Project.

FINDING(S) FOR NORTHERN BAJA MEXICO LNG TERMINALS AND ASSOCIATED PROPOSED INFRASTRUCTURE ALTERNATIVE

Description: This alternative considered the use of new sources of natural gas from new and proposed Northern Baja Mexico LNG Terminals as potential sources to meet California's natural gas needs.

Finding(s): 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.

Facts Supporting the Finding(s)

The use of Northern Baja Mexico LNG Terminals as a potential reasonable alternative to the proposed Project was eliminated from further analysis in the Final EIR because, in part, it is presently uncertain whether such projects could meet the Project objective of supplying 800 MMcf (22.7 million m^3) of natural gas per day from the Pacific Rim directly into the existing Southern California natural gas distribution infrastructure. LNG terminals in Northern Baja would also supply the growing demand for natural gas in Northern Baja. Neither the State of California nor the Federal government has jurisdiction over LNG terminals in another sovereign nation or over contracts governing the distribution of natural gas imported through such terminals.

Three LNG terminals are proposed for Baja California: Shell/Sempra's Energia Costa Azul located 14 miles (22.5 km) north of Ensenada; Chevron's Terminal GNL Mar

Adentro de Baja California near the Coronado Islands and offshore of Tijuana; and the Moss Maritime LNG Project offshore of Rosarito Beach.

As of February 2006, court challenges to the Energia Costa Azul LNG terminal had been resolved. This project has received all of its permits and has begun construction. Commercial operations are expected to begin in early 2008. This project would include a land-based receiving facility and related port infrastructure. Onshore, the project would cover 400 acres (162 hectares [ha]) of land and would have two full containment tanks, open-rack seawater vaporizers, and a 42-mile (68 km) 36- to 42-inch (0.9 to 1.1 m) diameter spur pipeline connecting the terminal to the Bajanorte pipeline. As proposed, the facility would have a capacity of 1,000 MMcf (28 million m^3) per day; however, there is sufficient space on site to expand the operations to include two additional storage tanks to increase the capacity to an average of 2,000 MMcf (57 million m^3) per day, with a peak of 2,600 MMcf (74 million m^3) per day.

Once operations begin, Sempra/Shell anticipates 500 MMcf (14 million m^3) per day to serve the needs of Mexico and the remainder would serve the southwestern U.S. This amount is equivalent to half the LNG that would be received at the terminal. The CPUC authorized Sempra Energy and Royal Dutch/Shell Group to create a border point where natural gas converted from LNG could move from Mexican to U.S. pipelines. This action opens up the possibility of importation of natural gas from Mexico to Southern California and other southwestern U.S markets.

Sempra stated that it intends to expand the Costa Azul terminal to double its base and peak load capacity. In 2006, Sempra solicited and received commercial interest in additional LNG processing capacity at its facility and announced that it will begin working with shippers to develop terminal agreements. Pending regulatory approval, the expansion could become operational as early as 2010, although SEMPRA has advised the CEC that no decision on whether to proceed with the expansion will be made for two years. However, to export gas to California from a Baja terminal, new pipelines would have to be built or expanded.

As an example, the CSLC and the Federal Energy Regulatory Commission (FERC) are currently preparing a Joint EIS/EIR for the North Baja Expansion Project (FERC Docket No. PF05-14-000, SCH# 2006081127), which proposes "...an interconnect with the existing Southern California Gas Company (SoCalGas) system in Blythe, California, for delivery into California and other southwestern U.S. markets." The purpose of this project is to transport natural gas from the LNG terminal projects in Baja California to California and Arizona. Once all the phases are completed, the total northbound capacity of the North Baja system would be 2,753 million standard cubic feet per day. The components of this project within the United States (California and Arizona) would have adverse environmental effects, which have been analyzed in the Joint EIS/EIR released on September 22, 2006, for a 90-day public review period that ended on December 28, 2006.

Of the lead agencies for the proposed Project, only the CSLC has jurisdiction over the proposed North Baja Expansion Project, both as to the right-of-way for the new pipeline