EXHIBIT C

7.0 MITIGATION MONITORING PROGRAM

As the Lead Agency under the California Environmental Quality Act (CEQA), the California State Lands Commission (CSLC) is required to adopt a program for reporting or monitoring regarding the implementation of mitigation measures for this Project, if it is approved, to ensure that the adopted mitigation measures are implemented as defined in this Environmental Impact Report (EIR). This Lead Agency responsibility originates in Public Resources Code Section 21081.6(a) (Findings) and the CEQA Guidelines Sections 15091(d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

7.1 MONITORING AUTHORITY

The purpose of a Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMCRP can be a working guide to facilitate not only the implementation of mitigation measures by the Project proponent, but also the monitoring, compliance, and reporting activities of the CSLC and any monitors it may designate.

The CSLC may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as affected jurisdictions and cities, and the California Department of Fish and Game (CDFG). The number of monitors assigned to the Project will depend on the number of concurrent activities and their locations. The CSLC or its designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

Any mitigation measure study or plan that requires the approval of the CSLC must allow at least 60 days for adequate review time. When a mitigation measure requires that a mitigation program be developed during the design phase of the Project, the Applicant must submit the final program to CSLC for review and approval for at least 60 days before any activity begins. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to the Project to ensure that appropriate agency reviews and approvals are obtained.

The CSLC or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC. Any deviation and its correction

shall be reported immediately to the CSLC or its designee by the environmental monitor assigned to the Project.

7.2 ENFORCEMENT RESPONSIBILITY

The CSLC is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to the Project. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CSLC or its designee.

7.3 MITIGATION COMPLIANCE RESPONSIBILITY

The Applicant is responsible for successfully implementing all the mitigation measures in the MMCRP, and is responsible for assuring that these requirements are met by all of its contractors and field personnel. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

7.4 GENERAL MONITORING PROCEDURES

Environmental Monitors. Many of the monitoring procedures will be conducted during the operational phase of the Project and during construction if applicable. The CSLC and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into the operation or construction process in coordination with the Applicant. To oversee the monitoring procedures and to ensure success, the environmental monitor assigned to the Project must be on site during that portion of the operation or potential construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

Operations and Construction Personnel. A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of operations and construction personnel and supervisors. Many of the mitigation measures require

action on the part of the supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures, will be taken:

- Procedures to be followed by operations or construction companies hired to do the work will be written into contracts between the Applicant and any contractors. Procedures to be followed by operations and construction crews will be written into a separate document that all personnel will be asked to sign, denoting agreement.

- One or more meetings will be held to inform all and train personnel about the requirements of the monitoring program.

- A written summary of mitigation monitoring procedures will be provided to supervisors for all mitigation measures requiring their attention.

General Reporting Procedures. Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems.

Public Access to Records. The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CSLC or its designee on request.

7.5 MITIGATION MONITORING TABLE

The following sections present the mitigation monitoring tables for each environmental discipline. Each table lists the following information, by column:

- Impact (impact number and title);
- Mitigation Measure (full text of the measure);
- Location (where the impact occurs and the Mitigation Measure should be applied);
- Monitoring/Reporting Action (the action to be taken by the monitor or Lead Agency);
- Effectiveness Criteria (how the agency can know if the measure is effective);
- Responsible Agency; and
- Timing (e.g., before, during, or after construction, during operation).

EXHIBIT C

Mitigation Monitoring Program – Proposed Project

These sections contain no separate Mitigation Measures for the proposed Project impacts: Energy and Socioeconomics and Environmental Justice.

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
SSR-1: Potential for Fires and Explosions (Class I)	**SSR-1a**. Inert Gas Systems and Fire Response. The Applicant shall extend the use of inert gas to all vessels (tankers and barges), if the California State Lands Commission (CSLC) Marine Facilities Division staff deems it feasible, that carry non-grade E cargo, to reduce the possibility of fires and explosions. The inert gas systems shall be in accordance with Title 46 of the Code of Federal Regulations Section 32.53. Response planning documents shall address response equipment and fire boats that would respond to a fire at the offshore location. These documents shall be completed and submitted to the CSLC staff within one year of lease approval and reports submitted to CSLC staff when changes are required to the document. The Applicant shall conduct biennial, or more frequently as needed, fire and response drills with the El Segundo Fire Department as part of its emergency response preparedness training.	Marine Terminal offshore	Recording of inert gas systems on Declaration of Inspection	Inspection of Declaration of Inspection	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
	SSR-1b. Lease Modifications. The lease for the facility shall contain a clause allowing the California State Lands Commission (CSLC) to add or modify mitigation measures in the event that cost-effective technologies become available that would significantly improve protection from fires or explosions if they could be readily implemented during the lease term, as defined by "best	All areas	Inspections of operations	Use of outdated equipment	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	achievable technology" (PRC Section 8750(d)). Modifications should be made if a fire or explosion occurs during the lease term to take advantage of lessons learned. Annual reports shall be submitted to CSLC staff identifying any lease modifications.					
SSR-2: Potential for Spills (Class I)	**SSR-2a.** Pipeline Vacuum System. The Applicant shall ensure that the pipeline vacuum system is operational and able to function at all times when the Marine Terminal is not loading. This shall be conducted within one year of lease approval and reported to California State Lands Commission staff.	Marine Terminal onshore	Inspection of vacuum leak detection system	Inspect vacuum system installed and operational	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
	SSR-2b. Pipeline Testing System. The Applicant shall ensure that the following activities accompany all vessel and barge loading and unloading operations and that these measures are incorporated in the emergency response plans, terminal operations plans, and vessel transfer procedures, as applicable: 1. The pipeline and hoses shall be pressure tested three times during each cargo transfer: once before the vessel or barge is connected; once after the vessel or barge is connected; and once after the vessel or barge is disconnected from the pipeline. Each pipeline shall be additionally pressure-checked monthly. 2. If the pressure cannot be maintained once the pipeline is pressured, the system shall be placed under a vacuum and divers shall be mobilized to investigate the possible leak.	Marine Terminal onshore	Inspection of system, submittal of report documenting the analysis review	Report recommendations implemented	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

EXHIBIT C

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	3. A line boat and tug shall be at the berth during all transfer operations to visually monitor for leaks. 4. A boat at the berth shall be equipped with at least 600 feet of boom for rapid response to a spill. Periodic drills shall be performed to demonstrate the ability to deploy and maneuver boom to the satisfaction of California State Lands Commission staff and Office of Spill Prevention and Response. lease approval					
	SSR-2c. Testing of Leak Detection Equipment. Within one year of lease issuance and annually thereafter, the Applicant shall test the leak detection systems (including the vacuum system and systems to detect leaks while loading) by utilizing by-pass valves, or other equivalent methods, to verify the function of these systems and to make adjustments as needed. Test reports shall be submitted to California State Lands Commission staff annually and shall include a discussion as to whether the system is using the most recent technology.	Marine Terminal onshore	Submittal of leak detection test report	Effectiveness of leak detection documented	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
	SSR-2d. Pipeline Leak Detection. Within one year of lease approval, the Applicant shall ensure a leak detection system is in place during all transfer operations that can detect a leak of two percent of the flow rate within five minutes. This could involve installing flow meters at both the shipping end and the receiving end of the loading pipelines that utilize a means of conducting automatic and continuous flow balancing, a	All areas	Review and inspection of flow meters and balancing programs	To detect a pipeline leak, per 2 CCR, Article 5.5, Section 2569	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	pressure-type system, or other equivalent methods. Any deviations shall activate an alarm system at both the shipping and receiving locations.					
	SSR-2e. Double Hulled Vessels. During the term of the 30-year lease, all vessels that call at the Marine Terminal shall be double hulled.	Marine Terminal offshore	Recording of double hulled status on Declaration of Inspection	Inspection of Declaration of Inspection	CSLC	During term of 30-year lease
	SSR-2f. Pipeline Inspections. In addition to periodic inspections and surveys, within one year of lease approval, the Applicant shall implement smart-pig inspections, cathodic inspections of the entire pipelines, bathymetric surveys and visual inspections (either remote-operated-vehicle or camera-equipped diver to ensure a record of the inspection) of all Marine Terminal pipelines. The entire pipeline route and berths shall be visually inspected and bathymetric surveys conducted, at least every three years and after major winter storms. At a minimum, visual surveys shall inspect unsupported free spans and vortex shedding, anchors and mooring lines, and other anomalies. The cathodic protection testing should be conducted per National Association of Corrosion Engineers SP0169. Close interval cathodic protection testing should be conducted every three to five years to ensure that the cathodic protection system is operating correctly throughout the entire length of all the pipelines (onshore and offshore). Smart-pigging shall be conducted every three years or to the satisfaction of the California State	Marine Terminal offshore	Submittal of smart-pig inspection reports	Correction of pipeline features to allow for smart-pig inspections and submittal of resulting condition reports	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

EXHIBIT C

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Lands Commission (CSLC) staff. Written results of each inspection in the form of a report shall be submitted to the CSLC staff and pipelines repaired as necessary.					
	SSR-2g. Bow Tube and Thruster Leaks. During the term of the 30-year lease, the Applicant shall implement techniques to detect bow tube and thruster leaks for all vessels.	Marine Terminal offshore	Visual observation	Ability to detect oil on the surface of the water	CSLC	During term of 30-year lease
	SSR-2h. Motor Operated Valve System. During the term of the 30-year lease, the Applicant shall ensure that the motor operated valve (MOV) control system is reliable through testing and maintenance procedures, as indicated in past process hazards reports, and the results of testing shall be submitted to the California State Lands Commission staff annually.	Marine Terminal onshore	MOV is functional	Ability to stop the flow of oil without surge pressure.	CSLC	During term of 30-year lease
	SSR-2i. Automatic Identification System Shipboard Equipment. During the term of the 30-year lease, all vessels calling at the Marine Terminal shall be equipped with shipboard automatic identification system (AIS) equipment.	Marine Terminal offshore	Recording of AIS status on Declaration of Inspection	Application of AIS per 33 CFR, Section 164.46	CSLC	During term of 30-year lease
	SSR-2j. Berm and Drainage at Onshore Marine Terminal. The Applicant shall install drain/sump protection in the form of sealable coverings, valves, drainage procedures, or another methods to prevent flow of spilled oil through the drains/sumps at the onshore areas of the Marine Terminal to the environment. The drain/sump protection would prevent a spill of material at the loading pumps or other Marine Terminal equipment from entering the drains/sumps and thereafter affecting the ocean. All areas of the	Marine Terminal onshore	Submittal of procedures and modifications to drain system and survey of entire Marine Terminal area	Inspection of site	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	onshore Marine Terminal shall be protected by berms that can contain a worst-case discharge from the pumps or pipelines, including potential drain-down from Refinery tankage. Onshore pipelines shall be protected from vehicle impacts. These protections shall occur within one year of lease approval and a report shall be submitted to California State Lands Commission staff including drain/sump descriptions and measures taken and a survey of the onshore areas with spill capture volumes.					
	SSR-2k. Pipeline Maintenance. Within one year of lease approval, the Applicant shall ensure that the recommendations from all previous hazard and operability studies and the cathodic protection system reports are implemented. HAZOP studies shall be updated as required by the EPA or OSHA and reports submitted to California State Lands Commission staff	All pipeline areas	Submittal of updated cathodic protection surveys indicating that measures are implemented	Review of submittals and inspections to verify compliance with 2 CCR, Article 5.5, Section 2570	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
SSR-3: Disturbance of Potentially Contaminated Seafloor Sediments (Class II)	**SSR-3.** Sampling Program for Sediments Within the Proposed Project. Sixty days prior to the start of any major planned offshore construction (ongoing during construction, as applicable, but excluding routine inspection, maintenance, and repair) that would disturb sediments, the nature of potential contamination within these sediments shall be defined. Samples should be collected and analyzed, and results summarized in a report to the California State Lands Commission staff. This report should include, at a minimum, recommendations to minimize disruption of any identified contaminated sediments, including	Marine Terminal offshore	Submittal of sampling report	Samples determined to be uncontaminated	CSLC	60 days prior to start of any construction and ongoing during construction (as applicable)

EXHIBIT C

Table 7-1
System Safety and Reliability

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	removal if necessary. Sediments disturbed during construction found to be contaminated shall be appropriately managed prior to conducting any offshore activities.					

Table 7-2
Water and Sediment Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
WSQ-1: Oil Spills (Class I)	**SSR-2a** through **SSR-2k.** The Applicant shall implement these measures to reduce the frequency and impacts of spills by decreasing detection times and increasing response capabilities. This process shall occur within one year of lease approval and reports submitted to California State Lands Commission staff annually thereafter.	All areas	See SSR-2	See SSR-2	See SSR-2	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
WSQ-2: Disturbance of Seafloor Sediments (Class II)	**SSR-3.** Sampling Program for Sediments Within the Proposed Project. Sixty days prior to the start of any major planned offshore construction (ongoing during construction, as applicable, but excluding routine inspection, maintenance, and repair) that would disturb sediments, the nature of potential contamination within these sediments shall be defined. Samples should be collected and analyzed, and results summarized in a report to the California State Lands Commission staff. This report should include, at a minimum, recommendations to minimize disruption of any	Marine Terminal offshore	Submittal of sampling report	Samples determined to be uncontaminated	CSLC	60 days prior to start of any construction and ongoing during construction (as applicable)

Table 7-2
Water and Sediment Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	identified contaminated sediments, including removal if necessary. Sediments disturbed during construction found to be contaminated shall be appropriately managed prior to conducting any offshore activities.					
	WSQ-2. Sediment Sampling within Scour Areas. The Applicant shall perform chemical analysis of sediment samples collected from within the propeller-wash scour areas beneath Berths 3 and 4, and if contaminant concentrations exceed biological effects thresholds, the Applicant shall remediate the contamination or move the Berth to uncontaminated areas. The field sampling and analysis program shall be performed at least once for the existing berth locations and written reports shall be submitted to the California State Lands Commission staff in accordance with MM SSR-3 60 days prior to the start of any construction and shall be ongoing during construction (as applicable). Additional sediment sampling, analysis, and reporting shall be conducted within projected scour areas whenever the berths are relocated more than 500 feet (152 m) from their present locations.	Marine Terminal offshore	Submittal of sampling report	Samples determined to be uncontaminated	CSLC	60 days prior to start of any construction and ongoing during construction (as applicable)

EXHIBIT C

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
BIO-1: Oil Spill Impacts to Marine Biological Resources (Class I)	**BIO-1a.** Update the Oil Spill Contingency Plan to Reflect the Project Changes. The Applicant shall update the Oil Spill Contingency Plan to incorporate changes in activities that result from the proposed Project. The revised plan shall be approved by the California Department of Fish and Game (CDFG) Office of Spill Prevention and Response (OSPR) and submitted to California State Land Commission (CSLC) staff within one year of lease approval with annual reports submitted to CSLC staff thereafter. The plan shall incorporate detailed response procedures for marine oil spills resulting from vessel groundings or collisions, as well as for pipeline failure and failures occurring during transfer of the oil to and from the barge. Worst-case discharge scenarios shall be updated accordingly. In addition, lessons learned from the response and cleanup of the 1997 Platform Irene or 2010 Deepwater Horizon oil spills shall be incorporated into the Response Plan. The personnel and training sections of the Oil Spill Contingency Plan shall be updated and identify training requirements for all personnel that would be utilized to respond to oil spills. At a minimum, new personnel shall be trained immediately upon their hiring in the overall operational aspects of oil spill response, including the proper use of all equipment that would be utilized in oil spill response. Annual training for all personnel, which is a Federal requirement, shall also be included in the Oil Spill Contingency Plan to provide personnel	All Project-related areas	Submit plan for review and approval.	Plan approval	CSLC, CDFG	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	with an understanding of their training responsibilities. The annual training shall include training in the operation of new equipment that may be utilized in oil spill response, retraining in the operation of existing equipment, and review of the oil spill response requirements that are identified in the Oil Spill Contingency Plan.					
	BIO-1b. Vessels That Call on the Terminal Shall Implement Their Own Oil Spill Response Plan. The Applicant shall revise its Vessel Pre-Arrival Questionnaire for all arriving vessels to verify compliance with the requirements of 33 CFR 155, Subpart D. The Vessel Pre-Arrival Questionnaire shall require the vessel operator to provide the date and document number of the approved Oil Spill Response Plan, the plan to be available onboard, and specific elements of the response plans be complete, including but not limited to: 1. Procedures to mitigate suspected cargo tank or hull leaks and spills associated with cargo transfers, including transfer system leaks and tank overflow; 2. Procedures related to grounding and collisions, explosions, fire, hull failures, excessive list, or equipment failure; 3. Procedures for the crew to deploy discharge-removal equipment; and 4. The status and availability of discharge-removal equipment. lease approval	All Project related areas	The Applicant shall submit the updated plans to the CSLC staff. The CLSC staff shall review and approve the plans	Oil spill Response Plan is in place for vessels calling on the Terminal	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
BIO-2: Oil Spill Impacts to	**BIO-1a, BIO-1b**, and **SSR-2a** through **SSR-2k**. These mitigation measures should occur 60 days	All Project-	Submit plan for review and	Plan approval	CSLC,	60 days prior to start of

EXHIBIT C

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Commercial and Recreational Fishing (Class I)	prior to the start of any construction and be ongoing during construction (as applicable).	related areas	approval		CDFG	any construction and ongoing during construction (as applicable)
BIO-3: Vessel Traffic and Marine Construction Impacts to Biological Resources (Class II)	**BIO-3.** Marine Mammal and Turtle Contingency Plan. The Applicant shall ensure that a contingency plan is developed and implemented for all vessel operators utilizing the Marine Terminal (including tankers, line boats, and launches) that focuses on recognition and avoidance procedures when marine mammals and turtles are encountered within 12 nautical miles of the California shoreline. The plan shall be submitted within one year of lease approval and reports shall be submitted to California State Land Commission staff annually thereafter. Minimum components of the plan include: 1. Existing and new vessel operators shall be trained by a marine mammal expert to recognize and avoid marine mammals and turtles prior to Project-related activities. Training sessions shall focus on the identification of marine mammal and turtle species, the specific behaviors of species common to the Project area and transport routes, and awareness of seasonal concentrations of marine mammal and turtle species. The operators shall complete refresher training annually. 2. A minimum of two observers shall be placed	All offshore areas	Periodic inspection and compliance monitoring	Minimize interactions between vessels and marine mammals	CSLC, CDFG	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	on all support vessels during the spring and fall gray whale migration periods (generally December through May), and during periods/seasons when other marine mammals, such as migrating fin, blue, and humpback whales (generally June through November), are known to be in the Project area in relatively large numbers. Observers can include the vessel operator and/or crew members, as well as any Project worker that has received proper training. Vessel operators and crews shall maintain a vigilant watch for marine mammals and sea turtles to avoid striking sighted protected species. 3. Vessel operators will make every effort to maintain a distance of 1,000 feet (305 m) from sighted whales, and 150 feet (45.7 m) or greater from sea turtles or smaller cetaceans whenever possible. 4. When small cetaceans are sighted while a vessel is underway (e.g., bow-riding), vessel operators shall attempt to remain parallel to the animal's course. When paralleling whales, supply vessels will operate at a constant speed that is not faster than the whales' and shall avoid excessive speed or abrupt changes in direction until the cetacean has left the area. 5. Per NOAA recommendations, and when safety permits (i.e., excluding during poor sea and weather conditions, thereby ensuring safe vessel maneuverability under those special conditions), vessel speeds shall not exceed 11.5 mph (10 knots) when mother/calf pairs,					

EXHIBIT C

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	groups, or large assemblages of cetaceans (greater than five individuals) are observed near an underway vessel. A single cetacean at the surface may indicate the presence of submerged animals in the vicinity; therefore, prudent precautionary measures, such as decreasing speed and avoiding sudden changes in direction, should always be exercised. The vessel should route around the animals, maintaining a minimum distance of 300 feet (91.4 m) whenever possible. 6. Whales may surface in unpredictable locations or approach slowly moving vessels. When an animal is sighted in the vessel's path or in close proximity to a moving vessel and when safety permits, operators will reduce speed and shift the engine to neutral. Vessel operators will not engage the engines until the animals are clear of the area. 7. Support vessels shall not cross directly in front of migrating whales, other threatened or endangered marine mammals, or marine turtles. 8. Support vessels shall not separate female whales from their calves. 9. Vessel operators will not herd or drive whales. 10. If a whale engages in evasive or defensive action, support vessels will drop back until the animal moves out of the area. 11. Collisions with marine wildlife will be reported promptly to the Federal and state agencies listed below pursuant to each agency's					

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	reporting procedures. National Marine Fisheries Service Southwest Region, Stranding Coordinator Long Beach, CA 90802-4213 (562) 980-4017 California Department of Fish and Game Enforcement Dispatch Desk Long Beach, CA 90802 (562) 590-5132 or (562) 590-5133 California State Lands Commission Environmental Planning and Management Division Sacramento, CA 95825-8202 (916) 574-1900					
BIO-4: Vessel Traffic and Marine Construction Impacts to Commercial and Recreational Fishing (Class II)	**BIO-4.** Use Designated Marine Traffic Corridors. Support and tankering vessels shall use designated traffic corridors where possible during the term of the 30-year lease.	Marine traffic corridors	Compliance monitoring	Minimization of fishing gear entanglements	CSLC	During term of 30-year lease
BIO-5: Oil Spill Impacts to Onshore Biological Resources (Class I)	**BIO-5.** Update the Oil Spill Contingency Plan to Protect Sensitive Resources. The Oil Spill Contingency Plans (OSCP) shall be revised and updated to address protection of sensitive biological resources and revegetation of any areas disturbed during an oil spill from the proposed pipeline or cleanup activities. The updated OSCP shall be submitted within one year of lease approval and reports submitted to California State	All Project-related onshore areas between the Marine Terminal and connection to the coastal	Submit plan for review and approval	Minimization of impacts to sensitive biological resources	CSLC, CDFG	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

EXHIBIT C

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Land Commission (CSLC) staff annually thereafter. The revised OSCP shall, at a minimum, include: 1. Specific measures to avoid impacts on Federal- and State-listed endangered and threatened species and Environmentally Sensitive Habitat Areas during response and cleanup operations. Where feasible, low-impact, site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing from vessels to remove spilled material from particularly sensitive wildlife habitats, such as coastal estuaries, i.e., Ballona Wetlands, because procedures such as shoveling, bulldozing, raking, and drag-lining can cause more damage to a sensitive habitat than the oil spill itself. The Oil Spill Contingency Plan shall also evaluate the non-cleanup option for ecologically vulnerable habitats such as coastal estuaries. 2. Specific measures requiring spill response personnel to be adequately trained for response in terrestrial environments and spill containment and recovery equipment to be maintained in full readiness. Inspection of equipment and periodic drills shall be conducted at least annually and the results evaluated so that spill response personnel are familiar with the equipment and with the Project area including sensitive onshore biological resources. 3. When habitat disturbance cannot be avoided, stipulations for development and	All American Pipeline				

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	implementation of site-specific habitat restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts on local populations of sensitive wildlife species and to restore native plant and animal communities to pre-spill conditions. Access and egress points, staging areas, and material stockpile areas that avoid sensitive habitat areas shall be identified. The Oil Spill Contingency Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species. 4. Procedures for timely re-establishment of vegetation that replicates the habitats disturbed (or, in the case of disturbed habitats dominated by non-native species, replaces them with suitable native species) including: measures preventing invasion and/or spread of invasive or undesired plant species; restoration of wildlife habitat; restoration of native communities and native plant species propagated from local genetic sources including any sensitive plant species (such as the southern tarplant); and replacement of trees at the appropriate rate. 5. Monitoring procedures and success criteria to be satisfied for restoration areas. The success criteria shall consider the level of disturbance and condition of the adjacent habitats. Monitoring shall continue for three to five years, depending on habitat, or until the success criteria are met. Appropriate remedial					

EXHIBIT C

Table 7-3
Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	measures, such as replanting, erosion control or control of invasive plant species, shall be identified and implemented if it is determined that the success criteria are not being met. 6. The OSCP shall follow all the applicable portions of the Area Contingency Plan and National Contingency Plan under guidance from the appropriate lead agency (e.g., Office of Spill Response and Prevention).					

Table 7-4
Air Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
AQ-1: Exceedance of Incremental Health Risk Threshold During Project Operations (Class II)	**AQ-1.** Low Sulfur Furls in Marine Main and Auxiliary Engines and Speed Limits. Starting at the beginning of the new 30-year lease period and continuing throughout the 30-year lease period, all main and auxiliary engines on crude oil marine tankers calling at the Chevron El Segundo Marine Terminal shall use marine diesel oil or marine gas oil with a maximum of 0.1 percent sulfur by weight. In the event that marine diesel oil or marine gas oil with maximum 0.1 percent sulfur by weight content is not available, tankers shall use marine diesel oil or marine gas oil with maximum 0.2 percent sulfur by weight content. This measure shall apply while the tankers are in waters of the South Coast Air Basin as defined in	Marine Terminal offshore	Review of tanker contracts and Declaration of Inspection	All vessels using low sulfur fuel	SCAQMD, CSLC	During term of 30-year lease

Table 7-4
Air Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	the South Coast Air Quality Management District (SCAQMD) Rule 1142, including while hoteling or transferring product at the Marine Terminal. In addition, all marine tankers calling at the Chevron El Segundo Marine Terminal shall reduce speed to 12 knots within waters of the South Coast Air Basin as defined in AQMD Rule 1142.					
AQ-2: Emissions of Greenhouse Gases within the SCAB Could Exceed SCAQMD Thresholds (Class I)	**AQ-2.** Greenhouse Gas Monitoring and Reduction Strategies. The Applicant shall implement a program to quantify and report to the California State Land Commission staff greenhouse gas emissions associated with Marine Terminal operations within the South Coast Air Basin (SCAB) and within California. If these emissions exceed the greenhouse gas (GHG) emissions estimates associated with the baseline operations, then a GHG emission reduction program shall be implemented to reduce emissions to less than the baseline GHG emissions. The program could include measures such as: using green electrical power to run onshore equipment; requiring tugs to use biodiesel; utilizing shore power systems; utilizing shore-side pumping systems instead of vessel-powered pumps; further reducing vessel speed while in the SCAB; or other measures including offsite GHG reduction programs in the community.	Marine Terminal and routes within SCAB	Review of contracts and GHG inventory	Quantification of GHG emissions	SCAQMD, CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter

EXHIBIT C

Table 7-5
Aesthetics

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
AES-1: Oil Spills and Resultant Cleanup Operations Affect Visual Quality (Class I)	**SSR-1a**, **SSR-1b**, **SSR-2a** through **SSR-2k**, and **BIO-1a** and **BIO-1b**	See SSR-1, SSR-2, and BIO-1	See SSR-1, SSR-2, and BIO-1	See SSR-1, SSR-2, and BIO-1	See SSR-1, SSR-2, and BIO-1	See SSR-1, SSR-2, and BIO-1

Table 7-6
Geological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GEO-1: Rupture of Facilities from Earthquake Motion (Class I)	**GEO-1a. SSR-1a**, **SSR-1b**, **SSR-2a** through **SSR-2k**,and **BIO-1a** and **BIO-1b**	All areas	Submittal of geotechnical analysis	Review of new facility design	CSLC	60 days prior to start of any construction and ongoing during construction (as applicable)
	GEO-1b. Seismic Resistant Design. The Applicant shall perform seismic evaluation and design for all existing facilities or pipelines and employ current industry seismic design guidelines including but not limited to: Guidelines for the Design of Buried Steel Pipe by American Lifeline Alliance (2001),	Marine Terminal Onshore	Submittal of seismic analysis	Completed implementation of all seismic recommendations.	CSLC	Within one year of lease approval, and submit reports to CSLC staff

Table 7-6
Geological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Guidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines by Pipeline Research Council International (2004), and California State Lands Commission (CSLC) Marine Oil Terminal Engineering and Maintenance Standards for seismic resistant design of the pipeline. The seismic evaluation of existing facilities shall be conducted in accordance with the Local Emergency Planning Committee Region 1 Guidance for California Accidental Release Prevention Seismic Assessments including a walkthrough by a qualified seismic engineer. In addition, post-event inspections must follow the Marine Oil Terminal Engineering and Maintenance Standards guidelines. This evaluation and design shall be conducted within one year of lease approval and reports submitted to CSLC staff annually thereafter.					annually thereafter
	GEO-1c. Seismic Inspection. During the term of the 30-year lease, the operator shall cease associated pipeline operations and inspect all project-related pipelines and equipment following any seismic event in the region (Los Angeles County and offshore waters of the Santa Monica Bay and southern Channel Islands) that produces a ground acceleration of 5 percent of gravity (0.05 g) at the Marine Terminal site. The operator shall report the findings of such inspection to the California State Lands Commission (CSLC) staff, the city of El Segundo, and the County of Los Angeles. The operator shall not reinstate	All areas	Report of the results of inspection	Report submitted and restart of facilities acceptable	CSLC	During term of 30-year lease

EXHIBIT C

Table 7-6
Geological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	operations of the Marine Terminal and associated pipelines within the city of El Segundo until authorized by the CSLC.					
GEO-2: Oil Spills from Tsunami Wave Damage (Class I)	**GEO-2.** Tsunami Alert. Tsunami response training and procedures shall be developed to assure that construction and operations personnel will be prepared to act in the event of a large seismic event. As part of the overall emergency response planning for this project, the procedures shall include immediate evacuation requirements in the event that a large seismic event is felt that could affect the proposed Project site such that all precautions can be made in the event of a local tsunami. This shall include the departure of all vessels in berth or in the area. These procedures shall be submitted within one year of the lease approval and reports submitted to California State Lands Commission staff annually thereafter.	All areas	Submittal of updated emergency response plan including tsunami measures and procedures	Tsunami measures in place	CSLC	Within one year of lease approval, and submit reports to CSLC staff annually thereafter
GEO-3: Oil Spills as a Result of Liquefaction (Class I)	**GEO-1a** through **GEO-1c**	All areas	See GEO-1	See GEO-1	See GEO-1	See GEO-1

Table 7-7
Land Use, Planning, and Recreation

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
LUPR-1: Accidental Oil Releases Could Affect Recreational Activities (Class I)	Measures provided in the Oil Spill Contingency Plan and identified in **MM SSR-1a** and **SSR-1b**, **SSR-2a** through **SSR-2k**, and **SSR-3** and **MM BIO-1a** and **BIO-1b**, **BIO-3**, **BIO-4**, and **BIO-5**	See SSR-1, SSR-2, SSR-3, BIO-1, BIO-3, BIO-4, and BIO-5	See SSR-1, SSR-2, SSR-3, BIO-1, BIO-3, BIO-4, and BIO-5	See SSR-1, SSR-2, SSR-3, BIO-1, BIO-3, BIO-4, and BIO-5	See SSR-1, SSR-2, SSR-3, BIO-1, BIO-3, BIO-4, and BIO-5	See SSR-1, SSR-2, SSR-3, BIO-1, BIO-3, BIO-4, and BIO-5

Table 7-8
Noise

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
NOI-1: Construction Could Increase Noise Levels at Beach Areas (Class II)	**NOI-1.** Construction Noise Mitigation. Construction activities shall be limited to the hours between 7:00 A.M. and 6:00 P.M. and shall not occur during the weekends or on Federal holidays. A Noise Mitigation Plan, as required by the city of El Segundo (General Plan objective N.1-2), shall be prepared by the applicant to minimize noise impacts on beachgoers. The Noise Mitigation Plan shall be submitted to the California State Lands Commission staff for review and approval 60 days prior to the start of any construction.	All onshore construction areas	Preparation of noise plan	Monitoring of construction to ensure noise measures implemented	CSLC, City of El Segundo	60 days prior to start of any construction, and ongoing during construction (as applicable)

EXHIBIT C

Table 7-10
Cultural Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
CUL-1: Damage to or Disruption of Prehistoric or Historic Resources (Class II)	**CUL-1a.** Cultural Resources Avoidance Plan. Sixty days prior to the start of any construction activities, if any structure 45 years and older will be affected by the proposed Project, the structure shall be assessed and evaluated for potential historical significance, including, but not limited to, eligibility for listing under the California Register of Historical Resources. If the resource is determined to be eligible for listing in the California Register, a cultural resources avoidance plan shall be prepared to identify means to avoid impacts to cultural resources, if feasible. If avoidance is determined to be infeasible, a research and recovery plan shall be prepared. In the event that archaeological resources are unearthed during Project subsurface activities, all earth-disturbing work within a 200-meter radius must be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume. This shall be an ongoing process during construction (as applicable).	Marine Terminal offshore	Submission of survey results	Final construction design documents documenting location of any cultural resources and avoidance of these areas	CSLC	60 days prior to start of any construction, and ongoing during construction (as applicable)

Table 7-10
Cultural Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	CUL-1b. Phase I Field Reconnaissance. Prior to finalization of the location for pipeline rearrangement or replacement and 60 days prior to the start of any construction, Phase I field reconnaissance of the off-shore Marine Terminal area will gather geophysical data, including magnetometer and side scan sonar runs to identify any cultural resources. Shallow water scuba surveys may be required in areas that vessels cannot access. Findings from the analyses of the geophysical data will be compared with archival information and databases maintained by the California State Lands Commission and Bureau of Ocean Energy Management, Regulation, and Enforcement. This shall be an ongoing process during construction (as applicable).	Marine Terminal offshore	Submission of survey results	Final construction design documents documenting location of any cultural resources and avoidance of these areas	CSLC	60 days prior to start of any construction, and ongoing during construction (as applicable)
	CUL-1c. Phase II Resource Evaluation. If resources that will be impacted are encountered and identified in Phase I, Phase II will evaluate the resource as to its eligibility to the California Register by a qualified marine archaeologist. For offshore resources, this phase consists of a survey of the identified resources using a Remotely Operated Vehicle or scuba reconnaissance, if necessary, to collect further information about the resource, such as intactness, formal identification, and information necessary to provide an evaluation of its significance to California history. This evaluation shall occur 60 days prior to the start of any construction and shall be an ongoing process during construction (as applicable).	Marine Terminal offshore	Submission of survey results	Final construction design documents documenting location of any cultural resources and avoidance of these areas	CSLC	60 days prior to start of any construction, and ongoing during construction (as applicable)

EXHIBIT C

Table 7-10
Cultural Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	CUL-1d. Phase III Cultural Resources Avoidance Plan. Phase III would be necessary if the resource is determined to be eligible for listing in the California Register. Sixty days prior to the start of any construction, a cultural resources avoidance plan shall be prepared to identify means to avoid impacts to cultural resources, if feasible, including modifications to the location of the pipelines. If avoidance is determined to be infeasible, a research and recovery plan shall be prepared. In the event that archaeological resources are unearthed during Project subsurface activities, all earth disturbing work within a 200-meter radius must be temporarily suspended or redirected until an archeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume. This shall be an ongoing process during construction (as applicable).	Marine Terminal onshore	Submission of assessment results	Final construction design documents documenting location of any cultural resources and avoidance of these areas	CSLC	60 days prior to start of any construction, and ongoing during construction (as applicable)

Table 7-11
Mitigation Monitoring Program
Additional Measures for Alternatives

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Air Quality						
AQ-3: Exceedance of Air Quality Standards During Construction (Class I)	None proposed.	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
AQ-4: Criteria Emissions Associated With Vessel Operations Would Exceed SCAQMD Thresholds (Class I)	**AQ-1.** Low Sulfur Furls in Marine Main and Auxiliary Engines and Speed Limits. Starting at the beginning of the new 30-year lease period and continuing throughout the 30-year lease period, all main and auxiliary engines on crude oil marine tankers calling at the Chevron El Segundo Marine Terminal shall use marine diesel oil or marine gas oil with a maximum of 0.1 percent sulfur by weight. In the event that marine diesel oil or marine gas oil with maximum 0.1 percent sulfur by weight content is not available, tankers shall use marine diesel oil or marine gas oil with maximum 0.2 percent sulfur by weight content. This measure shall apply while the tankers are in waters of the South Coast Air Basin as defined in the South Coast Air Quality Management District (SCAQMD) Rule 1142, including while hoteling or transferring product at the Marine Terminal. In addition, all marine tankers calling at the Chevron El Segundo Marine Terminal shall reduce speed to 12 knots within waters of the South Coast Air Basin as defined in AQMD Rule 1142.	See AQ-1	See AQ-1	See AQ-1	See AQ-1	See AQ-1

EXHIBIT C

Table 7-11
Mitigation Monitoring Program
Additional Measures for Alternatives

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Land Use, Planning, and Recreation						
LUPR-2: Effect on Recreational Vessel Traffic Near New Mooring (Class II)	**LUPR-2.** Increased Awareness. The Applicant shall work with the U.S. Coast Guard to develop programs to inform recreational boaters of the new mooring location and collision avoidance techniques.	Marine terminal offshore	Coordination with USCG and designation of navigational aids, etc	Aids and designated areas in place	USCG CSLC	Before construction of offshore berth
Energy						
ENE-1: Loss of Petroleum Refining Capacity or an Increase in Energy Supply Disruptions in Southern California (Class I)	A number of mitigation measures, including expanding pipeline facilities to and from the ports, would require several years and involve numerous jurisdictions.	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Cultural Resources						
CUL-2: Damage to or Disruption of Prehistoric or Historic Resources During Offshore Activities (Class II)	Implement MM **CUL-1a**, **CUL-1b**, **CUL-1c**, and **CUL-1d**	Marine Terminal Offshore	Submission of survey results	Final construction design documents documenting location of any cultural resources and avoidance of these areas	CSLC	60 days prior to start of any construction, and ongoing during construction (as applicable)

Table 7-11
Mitigation Monitoring Program
Additional Measures for Alternatives

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Socioeconomics						
SOC-1: Displacement or Termination of Economic Activity (Class I)	**SOC-1.** Jobs Assistance Plan. The applicant shall prepare a jobs assistance plan that identifies methods to help displaced employees obtain approximately comparable jobs. The plan shall be consistent with the applicant's terms of employment policies. The jobs assistance plan shall be implemented for a period of a total of 4 months. Acceptable forms of assistance may include but are not limited to: provision of a job relocation center on-site prior to lease termination, contact with local employers to identify future staffing needs, comparable job placement within Chevron at another facility and relocation assistance, training for new skills, and retention of a job search firm to assist employees in obtaining new jobs.	Job relocation center on-site at the Marine Terminal	Preparation of Jobs Assistance Plan	Jobs Assistance Plan in place for a total of four months	CSLC	Prior to lease termination
SOC-2: Decreased Fuel Supply and Increased Fuel Supply Demand (Class I)	None feasible.	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
EJ-1: Increased Use of Pipelines Could Adversely Affect Populations	None feasible.	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

EXHIBIT C

7.0 Mitigation Monitoring Program 1

7.1 Monitoring Authority 1

7.2 Enforcement Responsibility 2

7.3 Mitigation Compliance Responsibility 2

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