6.0 MITIGATION MONITORING PROGRAM

As the Lead Agency under the CEQA, the 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 EIR. This Lead Agency responsibility originates in Public Resources Code section 21081.6(a) (Findings), and the State CEQA Guidelines sections 15091(d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

6.1 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. An 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, consultants, or local governmental agencies as deemed necessary or appropriate. Some monitoring responsibilities may be assumed by responsible agencies, such as affected local jurisdictions and the California Department of Fish and Game (CDFG). The number of construction monitors assigned to the project will depend on the number of concurrent construction 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 construction begins. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor to ensure that appropriate agency reviews and approvals are obtained as necessary.

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.

6.2 ENFORCEMENT RESPONSIBILITY

The CSLC is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to each construction spread. 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.

6.3 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 marine terminal 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.

6.4 GENERAL MONITORING PROCEDURES

Environmental Monitors. Monitoring procedures will be conducted during continued routine operations as well as accidental spills of the Project. The CSLC and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures in coordination with the Applicant. To oversee the monitoring procedures and to ensure success, the environmental monitor assigned to each mitigation measure must assure that the mitigation monitoring procedures or requirements are adhered to in accordance with the time specifications, if given. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

General Reporting Procedures. Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor assigned to the relevant construction spread. 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.

6.5 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, title, and impact class);
- Mitigation 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 (before, during, or after lease renewal; during operation, etc.).

Table 6-1
Mitigation Monitoring Program

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Land Use, Public Services, Transportation and Circulation, Noise, Visual Resources, Energy and Mineral Resources, Agricultural Resources, and Environmental Justice – These sections contain no mitigation measures for the proposed Project impacts.						
Geological Resources						
GEO-2: Damage to Facilities Due to Beach Scour (Class II)	**GEO-2a:** Consistent with recommendations by the County Energy Division (Santa Barbara County Energy Division 1999) and the California State Lands Commission (CSLC) Engineering Department, the marine loading line shall be monitored after winter storms for exposure, debris impact, and for unsupported spans. Should the pipe free span approach 30 feet (9 m) in the future, remedial actions, e.g., sandbags beneath the pipe, permanent pipe supports, evacuating the line, etc., shall be implemented to maintain the integrity of the line. In addition, assessment of the strains on the pipeline due to settling should be conducted when the pipeline is exposed and any additional supports should be added at that time.	On the beach near the EMT.	The Applicant employee (monitor) inspects the pipeline at the time determined by the County geologist to be "after winter storms". The monitor shall inspect the pipeline and prepare a photographic report on the pipe condition. The Applicant shall implement the identified remedial actions if the condition is as identified in **MM GEO-2a**. The County shall review the report and inspect if free span changes are noticed. Inspection by the County after any remediation activities are completed.	Unchanged settling of the pipe would indicate effectiveness of the measure.	CSLC	Every year the pipeline shall be inspected. Inspection by the County after any erosion events occur.
GEO-3: Facilities Damage due to Corrosion (Class II)	**GEO-3a:** Consistent with recommendations by the County Energy Division (Santa Barbara County Energy Division 2002) and the CSLC Engineering Department, the marine loading line shall be monitored after winter storms. In the event that the line is exposed by winter beach scour, the Applicant shall inspect the line with GUL and confirm thickness of problem areas with ultrasonic testing	On the beach near the EMT.	The Applicant employee (monitor) inspects the pipeline at the time determined by the County geologist to be "after winter storms". The monitor shall inspect the pipeline and prepare a photographic report on the pipe condition. The Applicant shall implement the identified repair actions if the condition is as identified in **MM**	Maintaining coating on the pipe would indicate effectiveness of the measure.	CSLC	Every year the pipeline shall be inspected. Inspection by the County after any repair activities are completed.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	technology. The Applicant shall re-coat and re-wrap all segments of the line damaged or missing pipeline coating. In addition, the remaining unexposed portion of pipe in the intertidal area shall similarly be excavated (preferably with hand tools), inspected, tested, re-wrapped, and re-coated. In addition, other structural components of the EMT, including the tanks, connecting pipelines, and valves shall be monitored for corrosion-related damage. This maintenance should be conducted on the pipeline if pipeline exposure does not occur within the next 5 years. The loading pipeline testing and inspection program shall comply with MOTEMS.		**GEO-3a**. The County shall review the report and inspect if free span changes are noticed. Inspection by the County after any after any erosion events occur.			
GEO-4: Erosion of Drainages (Class II)	**GEO-4a:** Best Management Practices (BMPs) such as temporary berms and sedimentation traps, including silt fencing, straw bales, and sand bags, shall be installed prior to work involving ground disturbance. The BMPs shall include maintenance and inspection of the berms and sedimentation traps during rainy and non-rain periods, as well as re-vegetation of impacted areas. Re-vegetation shall address plant type as well as monitoring to ensure appropriate covering of exposed areas.	The EMT and vicinity, beach, Devereux Slough.	The monitoring agency or designated monitor shall inspect the site of the ground disturbing activities, if such occur.	If erosion is avoided after the ground disturbing activities, the measure is effective.	CSLC	During and following ground disturbing activities.
GEO-5: Faulting and Seismicity (Class II)	**GEO-5a:** The Applicant shall cease terminal operations and inspect all EMT pipelines and storage tanks following any seismic event in the region (Santa Barbara County and	At the EMT facilities.	The Applicant shall report applicable seismic events and inspection results. The monitoring agency or designated monitor shall	Demonstration of EMT equipment integrity following an applicable seismic event.	CSLC	Following each applicable seismic event.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	offshore waters of the Santa Barbara Channel and Channel Islands) that exceeds a ground acceleration of 13 percent of gravity (0.13 g). The Applicant shall report the findings of such inspection to the CSLC and the SSRRC and shall not reinstitute operations of the EMT until authorized to do so by the CSLC.		review and approve the retrofitted facility.			
			Hazards and Hazardous Materials			
HM-1: Acute Risks of Crude Spills (Class II)	**HM-1a:** The Applicant shall institute measures that are consistent with the EOF's current legal operating status to reduce the crude oil hydrogen sulfide content before the crude oil leaves the EOF. These measures could include increased crude oil scrubbing or other measures to reduce the hydrogen sulfide levels in the crude oil.	At the EOF.	Crude H_2S sampling and content.	Crude H_2S levels maintained below target level.	CSLC	Within 6 months after approval of lease renewal.
	HM-1b: The Applicant shall, within six months from lease renewal, develop and submit to the CSLC and the County of Santa Barbara for review and approval, a tank maintenance program for the EMT crude oil tanks that addresses inspections, inspection frequency (both external and internal), maintenance of tank shell and appurtenances, non-destructive testing, cathodic protection, dike and drain maintenance, and seismic analysis and retrofits to ensure tanks conform to current building codes. API 653 full tank inspections should be conducted by a registered API 653 tank inspector at least every five years.	At the EMT.	Submission of the program, implementation of the program. API 653 Inspection report every 5 years.	No failures of the tanks are observed, all problems are detected before failures have a chance to occur.	CSLC	Within 6 months after approval of lease renewal.
HM-3:	**HM-3a:** The Applicant shall ensure that	At the	Annual CSLC audits of facility.	Vacuum testing,	CSLC	Within 12

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Increased Spill Sizes Due to Loading Pipeline Vacuum/ Evacuation Operation (Class II)	the loading line can be operated in a vacuum and that operation in a vacuum is established as part of the terminal operations manual and as part of the oil spill response. In lieu of vacuum operation, applicant could implement a method for evacuating the loading line in the event of a leak. Evacuation of the line should be possible at all times during loading (even when barge is empty).	EMT and the loading line.		changes in operating procedures.		months after approval of lease renewal.
HM-4: Increased Spill Sizes Due to Loading Pipeline Leak Detection (Class II)	**HM-4a:** The Applicant shall ensure that both the shipping end and the receiving end of the loading pipeline are equipped with flow meters and that the flow meters utilize a means of conducting automatic and continuous flow balancing to an accuracy of at least two percent. Any deviations shall activate an alarm system at both the shipping and receiving locations. All loading operations shall be observed by an operator who is on duty at all times during loading to ensure rapid detection of leaks or spills.	At the EMT onshore.	Annual CSLC audit, loading records, EMT operations manual.	Testing of leak detection capabilities.	CSLC	Within 12 months after approval of lease renewal.
HM-5: Increased Spill Sizes Due to Failure to Deploy Loading Booms (Class II)	**HM-5a:** Prior to commencement of each transfer operation at offshore terminals, the terminal operator shall provide sufficient boom appropriate to the conditions at the terminal, trained personnel and equipment, maintained in a stand-by condition at the berth, so that a length of at least 600 feet of boom will be deployed for effective containment within 30 minutes of a spill.	Between the EMT and the mooring.	Annual CSLC audit, loading records, EMT operations manual.	Booming of vessel.	CSLC	Within 6 months after approval of lease renewal.
HM-6: Spills	**HM-6a:** The Applicant shall investigate	Between	The Applicant shall report on	Acceptable	CSLC	Within 6 months

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Due to Loading Pipeline Failure from Inadequate Loading Pipeline Integrity Inspections (Class II)	and utilize, if applicable, a non-destructive testing procedure, which will enable inspection of the loading pipeline from the pump-house to the hose connection for both corrosion, internal and external, and for allowable pipe stresses due to settling. The Applicant shall also conduct pressure testing of the pipeline annually at 125 percent MAOP for four hours. A program of GUL, or equivalent, testing of the pipeline as far into the intertidal zone as practical shall be established with testing at a minimum of every three years. Close interval cathodic protection testing shall be conducted every three to five years to ensure that the cathodic protection system is operating correctly the entire length of the pipeline.	the EMT and the mooring.	the results of the inspection to the County every three years. The County shall review and approve the inspection results.	corrosion and stress levels.		after approval of lease renewal.
	HM-6b. Visual inspection of the entire pipeline route for unsupported spans or other pipeline route anomalies shall be conducted at least every three years. The beach section of the pipeline shall be inspected during and after storms to ensure that free-spans do not exceed 30 feet and that beach debris does not impact the pipeline. Written results of each inspection shall be submitted to the County and the CSLC. If the pipeline becomes exposed, all efforts shall be made to conduct GUL (or equivalent) inspections and pipe-wrap repairs as directed by the County in previous correspondence (SBC, 2002). Loading of the barge shall not be conducted when wave action threatens	Between the EMT and the mooring.	Tri-annual monitoring and reporting of pipeline free spans. More frequent monitoring and reporting if storms expose large sections of the pipeline.	Timely inspection and reporting of pipeline unsupported spans.	CSLC	Every three years or more frequent if conditions warrant.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	the integrity of the marine loading pipeline.					
HM-7: Spills Due to Pump Leaks and Lack of EMT Pump Drains Spill Containment (Class II)	**HM-7a:** The Applicant shall install drain protection in the form of sealable coverings, valves or other methods to prevent flow of spilled oil through the drains, on the EMT drains located at the far southern end of the EMT, immediately near the pumps and on the far side of the control shack. The drain protection would prevent a spill of crude oil that occurs at the loading pumps and/or at other EMT equipment from entering the drains and affecting the slough. Berms located at this end of the EMT should also be checked to ensure they can contain a worst case discharge from the pumps.	At the EMT pump area.	Annual CSLC audit, EMT operations manual, emergency response plans.	Drill reports.	CSLC	Within 12 months after approval of lease renewal.
HM-8: Increased Spill Size Due to Spill Response Planning and Drills (Class II)	**HM-8a:** The Applicant shall conduct periodic equipment deployment and on-water drills utilizing the designated response vessel as well as other vessels that would respond to a spill. Drills shall have a post-drill lessons-learned evaluation which is incorporated into the training and EAP documentation. Procedures for conducting drills shall be detailed on the EAP.	Barge and offshore pipeline route.	Annual CSLC audit, EMT operations manual, emergency response plans, drill reports.	Successful drill exercises and reports.	CSLC	Within 6 months after approval of lease renewal.
HM-9: Spills Due to Barge Hull Penetrations (Class II)	**HM-9a.** The Applicant shall replace the barge *Jovalan* with a double-hulled barge or convert the *Jovalan* to a double-hulled vessel or construct a pipeline within 18 months of lease approval.	Barge	Vessel inspections.	Presentation of barge credentials to USCG.	CSLC, USCG, SBC, APCD	Within 18 months after approval of lease renewal.
Air Quality						
AQ-1:	**AQ-1a.** If the proposed Project requires	Mooring	Monitor number of barge trips.	If total annual	CSLC, APCD	Every 12

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Increase in Emissions from Operations (Class II)	more than 14 barge trips/loadings to the San Francisco Bay area terminals out of the maximum 88 barge trips permitted in any consecutive 12-month period, the Applicant shall implement an emission reduction program that would consist of the following: (1) To be able to complete 88 annual trips with more than 14 trips to San Francisco Bay area terminals, the Applicant shall hire a tug and/or assist vessels that have combined NO_x emissions approximately 20 percent lower than the current tug and assist vessels. (2) Reduce running time of the tug vessel generator engine(s) during the time when the tug vessel is moored at the EMT and is not moving or mooring the barge. The time reduction shall be at least 20 percent. (3) If a 20 percent reduction in NOx emissions is achieved, the Applicant shall limit trips to the north to 62 in any consecutive 12-month period. There are no available measures to mitigate air quality impacts if all 88 trips are made to the north. If all the trips are made to the north, with the 20 percent reduction in NOx emissions from the tug and assist boats' main engines, the Applicant shall limit trips to the north to 62 in any consecutive 12-month period.	of the barge Jovalan	If barge trips are above 75 per 12-month period, the applicant shall submit the necessary emission data for the new tug/assist vessels. Review annual emissions for the generators on the vessels.	emissions of NOx are within the 21.56 ton/yr (15 ton per year increase from baseline), the measure is effective.		months, as the annual emission inventory for the facilities is submitted as required.
	AQ-1b. The operators of the tug and assist vessels shall minimize the use of the main and auxiliary engines during	Mooring of the barge	Monitor the activities of the vessels during loading. Monitor quarterly fuel reports.	If the fuel consumed by the vessels does not change per	APCD	Monitor vessel activities during every

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	loading when not moving or mooring the barge (the Jovalan or Olympic Spirit). This measure is applicable to normal operations and does not cover emergency response or operations.	Jovalan	The vessel fuel consumption should not change drastically per one loading, if no changes have been made to the vessels.	loading (if there were no changes to the engines), the measure is effective.		scheduled visit to the barge. Monitor fuel consumption every quarter.
AQ-2: Odor Emissions from Operation (Class II)	**AQ-2a.** The Applicant shall implement a monitoring program that requires a monitor to check the integrity of the tanks including the floating roof pans, specifically the internal roofs, at least on a weekly basis and daily if odor complaints are registered. If any free product is observed on the roofs, the loading shall proceed to drain the tanks to the maximum extent feasible, if necessary, to allow for the complete repair of the roof leak. The Applicant shall notify the APCD of the free product on the roofs as soon as practically possible. The applicant shall stop any loading of crude into the tank where leaks are discovered until the tank is repaired, inspected and approved for loading by the APCD. If the outlined tank monitoring does not successfully eliminate odor events from the tanks (there is one additional odor event) the Applicant shall install vapor control devices on the vents of the crude oil storage tanks. The vapor control devices shall be capable of an odorous compound removal efficiency of at least 90 percent. The Applicant shall submit an appropriate maintenance schedule based on control efficiency monitoring for the vapor control devices to the APCD for	EMT	A meeting shall be conducted between the Applicant and the APCD to agree on the exact device design, properties, and maintenance schedule. APCD shall inspect upon the installation. The Applicant shall report when the installation is complete.	If confirmed odor complaints number does not increase with the increased barge loadings and EMT operation, the measure is effective.	APCD	Inspect after the installation. Monitor proper function every year. Monitor number of odor complaints.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	its review and approval.					
	AQ-2b. The Applicant shall monitor the pressure in the system at all times during barge loading to prevent lifting of the PSVs due to overpressure. The operating procedures shall require immediate shutdown of the pumps in case of overpressure. Following the required shutdown of the loading pumps, Venoco shall identify the necessary actions to be taken in order to resume loading oil into the barge and avoid overpressure, i.e., such actions as resume loading into a different barge hold or resume loading at a lower rate. These requirements shall be incorporated into the monitoring requirements for the corresponding PTOs.	Barge Jovalan	A meeting shall be conducted between the Applicant and the APCD to agree on the exact device design, properties, and maintenance schedule. APCD shall inspect upon the installation. The Applicant shall report when the installation is complete.	If confirmed odor complaints number does not increase with the increased barge loadings and EMT operation, the measure is effective.	APCD	Inspect after the installation. Monitor proper function every year. Monitor number of odor complaints.
AQ-3. Increase in Health Risk (Class II)	**AQ-3a.** Verified Level 3 diesel catalysts on all diesel-powered barge equipment. The current list of CARB-Verified Level 3 diesel catalysts is located at http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm. The catalysts shall be capable of achieving an 85% reduction for diesel particulate matter.	EMT	APCD shall inspect upon the installation. The Applicant shall report when the installation is complete.	Reductions in diesel particulate emissions and associated health risk.	APCD	Within 18 months after approval of lease renewal to coincide with MM HM-9a.
	AQ-3b. The Applicant shall limit the number of barge trips to no more than 50 trips per year.	EMT	The Applicant shall submit annual fuel use and information on barge visits to the CSLC and APCD for verification.	Limits on the number of trips will minimize diesel particulate emissions and associated health risk.	CSLC, APCD	Annually
AQ-4: Increase in	**AQ-4a.** GHG Emissions Offsets. If additional transportation of crude oil to	EMT and Barge	The Applicant shall submit annual GHG emission	Offset all future GHG emissions	APCD	Annually

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Greenhouse Gas Emissions (Class II)	the permitted levels occurs, the Applicant shall offset any increase in GHG emissions above baseline levels (at time of NOP). Annual GHG emission inventories and any required offsets shall be submitted to the SBCAPCD for verification. GHG emission offsets shall be verified by an independent third-party, such as the California Climate Action Registry, as approved by the SBCAPCD.		inventories and any required offsets to the APCD for verification.	over baseline (at time of NOP).		
Hydrology, Water Resources, and Water Quality						
WQ-2: Potential Facilities Leaks and Impacts to Nearby Onshore Waterways (Class I)	**WQ-2a.** A site-specific Storm Water Pollution Prevention Plan shall be prepared and submitted to the California Regional Water Quality Control Board (RWQCB), Central Coast Region, before the lease extension is granted, to prevent adverse impacts to nearby waterways associated with oil spills and contaminated storm water releases not covered under the EAP, which only applies to "significant events" and is not discussed in detail by the OSCP. This plan would similarly include, but not be limited to, site-specific diagrams illustrating primary surface drainage features, e.g., the southeast trending gully leading to the dune swale pond, and proposed spill containment, i.e., dike configurations, within those drainages; delineation of drainage features; and a description of Best Management Practices, including spill containment equipment and procedures that are tailored for the	Venoco offices	The applicant shall submit the updated plan to the RWQCB. The RWQCB shall review and approve the plan.	If the water pollution prevention is attained the measure is effective.	CSLC, RWQCB, Central Coast Region	Within 6 months after approval of lease renewal.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	project site. The plan shall also describe the source water, existing uses, and water disposal protocol of the onsite pond, in the southwest portion of the EMT.					
			Biological Resources			
BIO-1: Oil Spill Impacts to Marine Biological Resources (Class I)	**BIO-1a.** Offshore inspections of the loading pipeline shall be conducted on a regular basis, as determined by the CSLC and/or other regulatory agency, throughout the extended life of the Project. Inspections shall use the best available technology. When structural anomalies are identified that compromise the integrity of the pipeline, as determined by the CSLC and/or other regulatory agency, flow through the pipeline shall cease until repairs can be affected.	The pipeline between the EMT and mooring location.	The Applicant shall inspect the pipeline and provide the report to the CSLC and County every three years. If any anomalies are detected and repairs being conducted, the County shall inspect the repairs being conducted and approve.	Lack of leaks pipeline leaks.	CSLC	Every three years, and inspection during repairs if any.
	BIO-1b. The Applicant shall update the OSCP to incorporate changes in activities that result from the proposed Project. For example, 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 cleanup of the 1997 Platform Irene oil spill shall be incorporated into the Response Plan. These lessons include operator training in recognizing the significance of deviations in pipeline operating	Venoco offices	The applicant shall submit the updated plan to the CSLC and County. The CSLC and County shall review and approve the plan.	Oil spill cleanup is effective.	CSLC	Within 12 months after approval of lease renewal.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	parameters, inspections required to restart equipment that automatically shuts down in response to a process deviation, and rapidly implementing surveillance activities following process deviations to determine if a spill has occurred. The personnel and training sections of the OSCP shall be updated and will 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 OSCP to provide personnel 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 OSCP.					
BIO-4: Marine Vessel Traffic Impacts on Commercial and Recreational	**BIO-4a.** Support vessels shall use designated traffic corridors. If support vessels travel outside such corridors and damage fishing gear, disputes over damage to commercial fishing gear resulting from EMT support vessel traffic shall be the responsibility of the	Offshore in the vicinity of the EMT and along the barge routes.	The vessel owners and operators shall be informed of the designated routes. The Applicant shall report to the CSLC about informing the vessel operators about the designated routes.	No damage to fishing gear occurs. If damage occurs, the dispute resolution is handled promptly and to the satisfaction of the	CSLC	Within 6 months after approval of lease renewal.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Fishing (Class II)	EMT support vessel to repair or replace.			party that sustained damages.		
BIO-5: Vessel Traffic Impacts on Marine Mammals and Turtles (Class II)	**BIO-5a.** The Applicant shall ensure that vessel operators develop and implement a contingency plan that focuses on recognition and avoidance procedures when marine mammals are encountered at sea. Minimum components of the plan include: Existing and new vessel operators shall be trained by a marine mammal expert to recognize and avoid marine mammals prior to project-related activities. Training sessions shall focus on the identification of marine mammal species, the specific behavior of species common to the project area and barge routes, and awareness of seasonal concentrations of marine mammal species. The operators shall be re-trained annually. A minimum of two marine mammal observers shall be placed on all support vessels during the spring and fall gray whale migration periods (generally December through May), and during periods/seasons when marine mammals are known to be in the project area and along the barge route 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 will make every effort to maintain a distance of 1,000 ft (305 m) from sighted whales and other	On the vessel routes and the oil loading location.	Prepare and submit the plan to the CSLC and California Department of Fish and Game for review and approval.	There is no animal injury or mortality.	CSLC, California Department of Fish and Game	Within 12 months after approval of lease renewal.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	threatened or endangered marine mammals or marine turtles. Vessel speed shall be limited to 16 mph (14 knots). Support vessels will not cross directly in front of migrating whales or any other threatened or endangered marine mammals or marine turtles. When paralleling whales, supply vessels will operate at a constant speed that is not faster than the whales. Female whales will not be separated from their calves. Vessel operators will not herd or drive whales. If a whale engages in evasive or defensive action, support vessels will drop back until the animal moves out of the area. Any collisions with marine wildlife will be reported promptly to the Federal and State agencies listed below pursuant to each agency's reporting procedures. Stranding Coordinator, Southeast Region (currently, Joe Cordaro) National Marine Fisheries Service Long Beach, CA 90802-4213 (310) 980-4017 Enforcement Dispatch Desk California Department of Fish and Game Long Beach, CA 90802 (562) 590-5132 or (562) 590-5133 California State Lands Commission Environmental Planning and Management Division					

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Sacramento, CA 95825-8202 (916) 574-1890					
BIO-7: Oil Spill Impacts to Onshore Biological Resources (Class I)	**BIO-7a.** The OSCP shall be revised and updated to address protection of sensitive biological resources and revegetation of any areas disturbed during an oil spill or cleanup activities. The revised OSCP shall, at a minimum, include: 1. Specific measures to avoid impacts on Federal- and State-listed endangered and threatened species and ESHAs during response and cleanup operations. 2. Where feasible, low-impact, site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing from vessels shall be specified in the OSHMP to remove spilled material from particularly sensitive wildlife habitats, such as coastal estuaries, i.e., Devereux Slough, because procedures such as shoveling, bulldozing, raking, and drag-lining can cause more damage to a sensitive habitat than the oil spill itself. The OSCP shall also evaluate the non-cleanup option for ecologically vulnerable habitats such as coastal estuaries. 3. Spill response personnel shall be adequately trained for response in terrestrial environments and spill containment and recovery equipment shall be maintained in full readiness. Inspection of equipment and periodic drills shall be conducted at least	On the vessel routes, the oil loading location, and the shoreline in the vicinity.	Update and submit the plan to the CSLC and California Department of Fish and Game for review and approval.	There is no animal injury or mortality; cleanup activities fully eliminate oil impacts to biological resources.	CSLC, California Department of Fish and Game.	Within 12 months after approval of lease renewal.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	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. 4. When habitat disturbance cannot be avoided, the OSCP shall provide stipulations for development and 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 restoring 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 OSCP shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species. 5. 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					

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	appropriate rate. 6. Monitoring procedures and minimum success criteria to be satisfied for restoration areas shall be determined. The success criteria shall consider the level of disturbance and condition of the adjacent habitats. Monitoring shall continue for 3 to 5 years, depending on habitat, or until success criteria are met. Appropriate remedial measures, such as replanting, erosion control or control of invasive plant species, shall be identified and implemented if it is determined that success criteria are not being met.					
			Cultural Resources			
CR-1: Adverse impacts from oil spills (Class II)	**CR-1a.** The Oil Spill Contingency Plan (OSCP) shall be revised and updated to specifically address protection of cultural resources that could be disturbed during an oil spill or cleanup activities. The process to revise the OSCP shall, at a minimum, include: (1) A workshop shall be conducted by a qualified archaeologist and by a local Native American representative identified as a most likely descendant of the Barbareño Chumash by the Native American Heritage Commission to ensure that any new discoveries during oil spill cleanup activities are adequately recorded, evaluated, and, if impacted, mitigated. The workshop shall: a. review the types of archaeological resources that may be	Area of spill and vicinity.	Oil spill response and cleanup documentation.	Successful containment and cleanup of spill materials.	CSLC	Within 12 months after approval of lease renewal.

Impact (Class)	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	uncovered; b. provide examples of common archaeological artifacts and other cultural material to examine; c. describe what makes an archaeological resource significant to archaeologists and local Native American descendants; d. procedures that would be used to record, evaluate, and mitigate new discoveries; e. describe reporting requirements and the responsibilities of spill response personnel. The revised OSCP shall, at a minimum, provide (1) that a qualified archaeologist and Native American representative shall be present during all ground disturbances within recorded CA-SBA-1327 and/or CA-SBA-2341 site boundaries. (2) procedures that would be followed in case of discovery of disturbed as well as intact human burials and burial-associated artifacts. In the event that human remains would be encountered, the consultation with the most likely Native American descendant pursuant to PRC sections 5097.97 and 5097.98 would apply.					

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