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 the Revised PRC 421 Recommissioning 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, subdivision (a) (Findings), and the State Guidelines for Implementing CEQA sections 15091, subdivision (d) (Findings), and 15097 (Mitigation Monitoring or Reporting).

7.1 MONITORING AUTHORITY

The purpose of a Mitigation Monitoring Program (MMP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMP 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 Wildlife (CDFW). 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 the CSLC for review and approval at least 60 days before construction begins. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to the installation or implementation of the project or a project component (e.g., a pipeline “spread” [the equipment and crew needed to build a section of pipeline]) 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.

7.2 ENFORCEMENT RESPONSIBILITY

The CSLC, as lead agency, is responsible for enforcing the procedures adopted for monitoring through the environmental monitor. 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

Venoco is responsible for successfully implementing all the mitigation measures in the MMP, and shall ensure that these requirements are met by all of its construction 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 may 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 construction phase of the project. The CSLC and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with the Applicant. To oversee the monitoring procedures and to ensure success, the environmental monitor must be on site during that portion of 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.

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

This section presents mitigation monitoring tables (Table 7-1 to Table 7-13) for each environmental discipline that required mitigation measures. Each table lists the following information, by column:

- Impact (impact number, title, and impact class);
- 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 (before, during, or after construction; during operation, etc.).

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact GEO-1: Seismic and Seismically Induced Hazards Seismic activity along the More Ranch Fault Zone or other regional faults could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure that could expose Pier 421-2 facilities, including the pier, caisson and pipeline, to damage during the Project life; Pier 421-1 would be exposed to seismic hazards for approximately 1 year before decommissioning is completed (Less than Significant with Mitigation).	**MM GEO-1a. Include Seismic Loading Evaluation**. Venoco shall have the caisson at Pier 421-2 evaluated to ensure its ability to withstand effects of dynamic earth pressures, seismic overturning and base sheer, and to support Project facilities through the production life of the facility. Results of the evaluation, together with any redesign plans determined to be necessary to ensure the ability of the caisson to withstand effects of dynamic earth pressures, seismic overturning and base sheer, and to support Project facilities through the production life shall be reviewed and certified by a professional engineer and submitted to California State Lands Commission (CSLC) staff for approval. Prior to recommencement of production, and subject to receipt of all necessary approvals and permits to undertake the work, Venoco shall construct the necessary improvements to meet the criteria of this mitigation measure.	At PRC 421	Venoco shall ensure that a seismic loading evaluation is conducted, reviewed, and certified by a professional civil/structural engineer and that seismic design is incorporated into the upgrades to PRC 421.	Incorporating seismic design into the Project would reduce the chance of a seismic or seismically-induced hazard.	CSLC	Evaluate prior to finalizing Project design Implement prior to commencing production
	MM GEO-1b. Field-Verify Subsurface Condition Assumptions. Venoco shall establish a procedure to field-verify that the subsurface conditions used in the design of the past repairs and proposed improvements at the 421-2 caisson are representative of actual conditions to be encountered. The procedure established by Venoco for field-verification shall be submitted to California State Lands Commission (CSLC) staff for approval prior to	At PRC 421	Venoco shall submit procedure used to verify subsurface conditions used in the design of caisson repairs to the CSLC. If conditions warrant design modifications, revised design	Incorporating any required modifications into the Project design would reduce impacts to PRC 421 from a tsunami	CSLC	Verify prior to finalizing Project design Construct prior to commencing production

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	implementation. If the field conditions encountered require a design modification of past repairs and proposed improvements, then the revised design plans shall be reviewed and certified by a registered professional civil/structural engineer, and shall be submitted to the CSLC staff for approval. Prior to recommencement of production, and subject to receipt of all necessary approvals and permits to undertake the work, Venoco shall construct the necessary improvements to meet the criteria of this mitigation measure.		shall be reviewed and certified by a professional civil/structural engineer and submitted to CSLC.			
	MM GEO-1c. Seismic Inspection. Venoco shall inspect the structures, including Pier 421-2, pipeline, and associated infrastructure following any seismic event in the region (for these purposes defined as Santa Barbara County and offshore waters of the Santa Barbara Channel and Channel Islands) that exceeds a Richter magnitude of 4.0 (see also Appendix H, MM GEO-4c Seismic Inspection). Venoco shall report the findings of such inspection to the California State Lands Commission staff and City of Goleta staff. Venoco shall not reinstate operations of the pipeline within the City of Goleta until authorized by the City of Goleta.	At PRC 421 facilities	Venoco shall report applicable seismic events and inspection results. The monitoring agency or designated monitor shall review and approve the repairs.	Regular inspections after seismic events would permit timely repair.	CSLC, City of Goleta	Follow each applicable seismic event in the region
	MM GEO-1d. Tsunami Prepared-ness. In the event that a tsunami warning is issued for an area that includes PRC 421, Venoco shall cease production activities at PRC 421 as	At PRC 421 facilities	Venoco shall report applicable tsunami warnings and inspection results. The	Ceasing production during potential tsunami events and conducting	CSLC, City of Goleta	Follow each applicable tsunami warning event

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	quickly as possible within the constraints of operations and safety. When the tsunami warning is lifted, Venoco shall conduct a thorough inspection of Pier 421-2, pipeline, and associated infrastructure before resuming production. Venoco shall report the findings of such inspections to the California State Lands Commission and City of Goleta staffs.		monitoring agency or designated monitor shall review and approve the report and any repairs stemming from inspections.	inspections would minimize the risk of upset and release of oil.		
Impact GEO-2: Landslide and Slope Failure The Project would be located on a geologic unit or soil that is unstable, which could create potentially significant damage to the project access road and pipeline from a landslide or slope failure (Less than Significant with Mitigation).	**MM GEO-2a. Monitor Coastal Bluff and Access Road**. Venoco shall monitor the coastal bluff and access road weekly for signs of water saturation, including during and/or heavy rains, or after a sprinkler line leak from the Sandpiper Golf Course. If saturation is apparent, the source of the water infiltration shall be evaluated and, diverted (if possible) or removed. Venoco shall provide written weekly statements regarding bluff and access road stability and saturation conditions to the City of Goleta. If saturation is apparent, Venoco shall immediately report such finding to the City of Goleta. Within 24 hours of such a finding, Venoco shall identify the source of water infiltration and shall divert or remove the water source within 24 hours, and shall provide a written report with photo documentation to the City within one week of the action. If native habitats could be impacted as a result of related activities, Venoco shall coordinate the activities with the Project Biologist and implement MM TBIO-1b Project	At coastal bluffs and access road located north of PRC 421	As part of its routine inspection of facilities, Venoco shall inspect the coastal bluff and access road for signs of water saturation, including during and after heavy rains or after a sprinkler line leak.	If erosion is avoided after the ground disturbing activities, the measure is effective.	CSLC, City of Goleta	During and after heavy rain events or after a sprinkler line leak

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Biological Monitors and MM TBIO-1c Restoration Plan/Restoration.					
	MM GEO-2b. Maintain Existing Seawall and Rock Revetment. Venoco shall inspect the existing seawall and rock revetment weekly for signs of erosion or need for repairs. If eroded areas are observed, these shall immediately be filled in, and any areas in need of repair or addition of rip-rap shall be repaired consistent with applicable permit requirements. Venoco shall provide written weekly reports regarding existing seawall and rock revetment stability to the City of Goleta. If erosion is observed, Venoco shall immediately report such finding to the City of Goleta. Within 24 hours of such a finding, Venoco shall repair the erosion and shall provide a written report with photo documentation to the City within one week of the action. Venoco shall coordinate the activities with the Project Biologist and implement MM TBIO-1b Project Biological Monitors and MM TBIO-1c Restoration Plan/Restoration.	At seawall and rock revetment located just north of PRC 421	After completion of improvements, monitoring agency or designated monitor shall inspect seawall/ rock revetment for permit compliance. As part of its routine inspection of facilities, Venoco shall inspect seawall/ revetment for signs of erosion or need for repairs. Failures shall be reported. Any repairs shall be coordinated with monitoring agencies.	Ensuring the integrity of the seawall and revetment would protect the flowlines.	CSLC, City of Goleta	Daily as part of Venoco's routine inspection of facilities and as required to address major failures or repairs
	MM GEO-2c. Inspect and Repair Access Road and Pipeline after Landslide Events. Venoco shall monitor the access road and pipeline after bluff failure or landslide events and shall repair any damaged areas or add rip-rap consistent with applicable permit requirements. In addition to clearing the road of debris, Venoco shall test or inspect the pipeline immediately after any major slope	At PRC 421	Venoco shall contract a registered professional engineer or a registered certified engineering geologist to perform an onshore soil	Identifying expansive soils would alert monitors of conditions to look for and where to look, which would increase effectiveness of mitigation measure GEO-	CSLC, City of Goleta	Evaluate prior to finalizing Project design

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	failure to determine if pipeline damage has occurred and shall implement repairs to this infrastructure. If damage is observed, Venoco shall immediately report such finding to the City of Goleta. Within 24 hours of such a finding, Venoco shall repair the erosion and shall provide a written report with photo documentation to the City within one week of the action. Venoco shall coordinate the activities with the Project Biologist and implement MM TBIO-1b Project Biological Monitors and MM TBIO-1c Restoration Plan/Restoration.		evaluation to identify expansive soils. If any expansive soils are identified, the design of Project upgrades shall be amended as needed.	2a and GEO-2b.		
Impact GEO-3: Soil Settlement and Liquefaction The recommissioning of PRC 421 could potentially expose Project facilities such as the caisson and proposed pipeline to soil settlement or liquefaction that could damage these facilities, particularly the pipeline (Less than Significant with Mitigation).	**MM GEO-3. Perform Subsurface Evaluation**. An evaluation of soils within and beneath the Pier 421-2 caisson, seawall, revetment, and access road shall be performed to ascertain if the soil is fit for purpose. The evaluation shall be performed by a California-registered Geotechnical Engineer, and shall propose maintenance and repair procedures as needed to ensure these areas remain fit for purpose for the life of the Project. The conclusions and recommendations shall be incorporated into Project engineering design components, as applicable, and submitted to the California State Lands Commission, City of Goleta, and California Coastal Commission staffs for review and approval prior to issuance of permits for construction clearance.	At PRC 421	Venoco shall ensure that a subsurface evaluation is conducted by a registered professional engineer or engineering geologist and the results are incorporated into the upgrades to PRC 421.	Identifying the potential for soil settlement and liquefaction would allow engineers to design project upgrades appropriately.	CSLC, City of Goleta, CCC	Evaluate prior to finalizing Project design
Impact GEO-4: Corrosion, Weathering, and	**MM GEO-4a. Corrosion Protection Design Specifications**. The corrosion protection design specifications shall	At PRC 421	Venoco shall ensure that corrosion	Including corrosion protection in the	CSLC, City of Goleta	Include design specifications prior to review

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Erosion Corrosion, weathering, fatigue, or erosion could cause deterioration of structural components of PRC 421 (Less than Significant with Mitigation).).	be included on the design drawings. Once included, the revised design plans shall be reviewed and certified by a registered corrosion engineer or qualified mechanical or electrical engineer, and submitted to the California State Lands Commission staff for approval. Prior to commencement of production, and subject to receipt of all necessary approvals and permits to undertake the work, Venoco shall construct all corrosion protection improvements specified in the approved plans. If corrosion protection is required for the Project, with the exception of the caisson walls which are just beyond the City limits, all design plans shall be submitted to the City of Goleta for review and approval.		protection design specifications are included on the design drawings and that the plans are appropriately reviewed.	project specifications would reduce deterioration of structural components.		by professional civil or structural engineer
	MM GEO-4b. Check Overall Structural Stability against Wind and Wave Action. The Project design shall include evaluation of cyclic wind and wave action on structural components. Once included, revised design plans shall be reviewed and certified by a professional civil/structural engineer then submitted to the California State Lands Commission staff for approval. These revised design plans shall identify any additional construction required as part of the Project. Prior to commencement of production, and subject to receipt of all necessary approvals and permits to undertake the work, Venoco shall construct all structural improvements specified in	At PRC 421	Venoco shall ensure that cyclic wind and wave action on the structural components are evaluated and that the results of the analysis are included in the project design. Venoco will ensure that the revised design plans are certified by a professional civil/structural engineer.	Incorporating the impacts of wind and wave action into the project design would reduce the impacts on project facilities.	CSLC, City of Goleta	Include design specifications prior to review by professional civil or structural engineer

Table 7-1. Mitigation Monitoring Program—Geological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	the approved plans. Venoco shall submit the design plans to the City of Goleta, for review and approval for any part of the Project within City limits.					
	MM GEO-4c. Evaluate Embedment of Concrete Panels and Lean Concrete Backfill. Venoco shall include in the Project design an evaluation of the potential depth of scour and erosion during the lifetime of the Project within the Monterey Formation in the area of Pier 421-2. Venoco shall ensure that the concrete shoring panels and lean concrete backfill shall be embedded into the Monterey Formation to a depth greater than the maximum potential scour depth. Venoco shall submit all plans to the City of Goleta for work within City limits and California State Lands Commission staffs.	At PRC 421	Venoco will ensure that the design of the Project includes an evaluation of the potential depth of scour and erosion during the lifetime of the project.	Incorporating the impacts of scouring into the project design would reduce the impacts on project facilities.	CSLC, City of Goleta	Include design specifications prior to review by professional civil or structural engineer
	MM GEO-4d. Inspect Structures During and/or After Storm Events. Venoco shall conduct inspections of the structural components including the pier, caisson, causeway, seawall and revetment during and after major storm events. Venoco shall immediately report inspection results to the California State Lands Commission and the City of Goleta staffs and conduct repairs accordingly and per agency authorization.	At PRC 421	Venoco employees shall inspect structural components during and/or after winter storms. Monitor shall inspect structural components including piers, caissons, cause-ways, seawall, and revetment.	Regular monitoring would provide for early identification and repair of damage to structures.	CSLC, City of Goleta	Ongoing throughout project operation

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact S-2: Exposure of the Public and Environment to Safety Hazards Due to Collapse of the Pier 421-1 or 421-2 Caisson The Project would prolong the use of the aging caisson on Pier 421-2, which could collapse and lead to the release of hazardous materials and oil from within the caisson or from Project-related pipelines (Less than Significant with Mitigation).	**MM S-2a. Design Review/Wave Loading Evaluation**. Prior to implementing caisson repairs at Pier 421-2, Venoco shall develop design improvement plans that account for design wave loading conditions including hydrodynamic loading, overturning, and base shear, as well as the maximum credible earthquake according to the current California Building Code; these improvements shall be sufficient to support Project facilities through the production life. The revised design plans shall be reviewed and certified by a professional civil/structural engineer and shall be submitted to the California State Lands Commission staff for approval. Caisson repair shall be performed in accordance with approved design plans prior to recommencement of production at Pier 421-2.	At PRC 421	Venoco shall contract a civil/structural engineer to perform an analysis of the caissons to determine the structural stability of the facilities.	Structural stability analysis would allow project design to account for potential deficiencies.	CSLC, City of Goleta	Evaluate prior to finalizing Project design
	MM S-2b. Post Storm Inspection, Monitoring and Cleanup. Venoco shall amend the existing monitoring program to include regular monitoring and inspection of both caissons during the winter storm season. Damage to caissons shall be reported to California State Lands Commission staff and cleanup and removal of any debris immediately initiated (see also MM S-4e).	At PRC 421	Venoco shall ensure that the caissons are reinforced to withstand wave and tidal action, including tsunami-sized waves.	Ensuring that project facilities would withstand substantial wave and tidal action would reduce the potential for a release of oil.	CSLC, City of Goleta	Include design specifications prior to review by professional civil or structural engineer
Impact S-3: Exposure of the Public and Environment to	**MM S-3. Design Review by Civil/Structural Engineer**. Prior to construction on the Project and subject to receipt of all necessary	At PRC 421	Venoco shall contract a civil/structural engineer to	Structural stability analysis would allow project design to	CSLC, City of Goleta	Design Review: Evaluate prior to finalizing

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Safety Hazards Due to Collapse of or Damage to the Existing Timber Bulkhead or Rip-Rap Seawall The Project would prolong the use of the existing causeway and supporting, aging timber bulkhead and rip-rap seawall, which would be exposed to high winter surf and large wave events over the Project's life, leading to possible erosion or collapse and the potential for release of hazardous materials and oil from within the causeway or Project-related pipelines (Less than Significant with Mitigation).	approvals and permits to undertake the work, Venoco shall complete the following: • Venoco shall retain a licensed civil/structural engineer to review seawall design and recommend improvements to the Project seawall to permit it to support Project access road, pipelines, and power cables through the production life. • These potential design improvements, including a maintenance and repair plan to ensure fitness for purpose, shall account for anticipated winter surf conditions and for a design wave event. • West of Pier 421-1, improvements to the seawall may include use of additional appropriately sized (i.e., 1- to 3-ton boulders) rip-rap if needed to fill in small gaps in the wall. • Between Piers 421-1 and 421-2 and east of 421-2, to the maximum extent feasible, any needed seawall improvements shall consist of minor repairs to and strengthening of the existing timber bulkhead, unless seawall design review indicates that such improvements would be insufficient to protect the pipeline and power cables over the life of the Project.		perform an analysis of the timber bulkhead and seawall to determine the structural stability of both facilities.	account for potential deficiencies.		Project design Construction: Prior to restart of production, Venoco shall construct necessary improvements to meet criteria of MM
Impact S-4: Potential for Release of Oil or	**MM S-4a. Containment**. As the primary containment at Pier 421-2, the	Pier 421-2	Venoco shall ensure that the	Installing containment	CSLC	Design Review:

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Hazardous Materials from Pier 421-2 Project operations could result in the release of oil or hazardous materials from Project facilities, including the 421-2 well and caisson, drilling and separation equipment (Significant and Unavoidable).	well cellar shall be tested by Venoco to determine whether it is leaking, and coated with a rubber type liner or other sealant to prevent migration from the cellar walls or bottom to surrounding areas. If the well cellar is leaking, an engineering evaluation shall be performed to determine the best method to achieve containment; which may include replacement with a double wall cellar or retrofit with a membrane coating capable of containing oil and preventing migration. The revised design, which includes these improvements, shall be reviewed and certified by a registered engineer and submitted to the California State Lands Commission staff for approval, and Venoco shall construct all approved improvements prior to recommencing production.		Project design includes measures to update the well cellar and caisson deck at PRC 421-2.	features would reduce the potential for a release of oil to reach the environment.		Incorporate features into final Project design Construction: Prior to restart of production, Venoco shall construct all containment upgrades described in MM
	MM S-4b. Response Drills and Planning. Venoco shall revise its existing Oil Spill Contingency Plan (OSCP) to include site-specific procedures for response to a release from Pier 421-2, in accordance with applicable State and Federal regulations. The revised OSCP shall be submitted to the City of Goleta, county of Santa Barbara, California Department of Fish and Wildlife Office of Spill Prevention and Response, California Coastal Commission, and California State Lands Commission (CSLC) staffs for review and approval prior to issuance of the Land Use Permit. Venoco shall demonstrate spill	Pier 421-2	Venoco shall ensure that the existing OSCP is updated to include site specific procedures relevant to the Project and conduct a tabletop exercise of the Project.	Plan would ensure that clean up procedures are in place to quickly respond to a release from the Project.	CSLC, OSPR, CCC, City of Goleta	Complete Plan prior to Project operation Conduct tabletop exercise within 6 months after start of Project operation

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	response capability by responding to at least two surprise drills each year – one at Pier 421-2 and one along the pipeline route. A tabletop exercise shall be conducted within six months of operation to test and improve upon the revised procedures. Venoco shall prepare and submit a critique and recommendations of Venoco's OSCP, regarding Pier 421-2, to CSLC staff and shall demonstrate the effectiveness of Venoco's oil spill response plan. Any recommended adjustments to the frequency of drills required to improve the effectiveness of the measure, in consideration of all other Ellwood oil spill response drill operations by Venoco, and a timetable for implementation of drill schedules may be considered by CSLC staff. In addition, Venoco shall participate in the Santa Barbara County Area Oil and Gas Industry Emergency Response Plan (P-4 Plan).					
	MM S-4c. Casing Pressure Testing. Prior to initiating active pumping, Venoco shall perform pressure testing on the well casing to ensure that the casing meets required operating specifications. The exact pressure shall be determined by the reviewing agencies. If the casing does not meet required test pressure as reviewed and approved by the California Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR), Venoco shall implement casing repairs and	At PRC 421	Venoco shall ensure that well casing meets required operating specifications for pressure and shall repair and improve if it does not.	Measure would reduce the potential for a release of oil or hazardous materials.	CSLC, DOGGR	Prior to initiating active pumping

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	improvements subject to review and approval by the DOGGR and California State Lands Commission staffs.					
	MM S-4d. Regular Facility Inspections. As part of its daily facility inspections, Venoco shall check the caisson at Pier 421-2 for signs of oily or sulfurous leaks. If leaks are detected, Venoco shall report this occurrence to the City of Goleta, Santa Barbara County Office of Emergency Management, California Coastal Commission, and California Department of Fish and Wildlife Office of Spill Prevention and Response, and California State Lands Commission staffs, and in coordination with these agencies, take immediate steps to clean up or repair such leaks and prevent public exposure to any hazards.	At PRC 421	Venoco shall inspect facilities on a daily basis for signs of leaks.	Implementation of this measure would ensure timely repairs and reduce the risk of release of oil or hazardous materials.	CSLC, OSPR, City of Goleta, Santa Barbara County Office of Emergency Services, CCC	Regularly throughout Project duration
	MM S-4e. Quantitative Risk Assessment (QRA) and Implementation of QRA-Recommended Measures. Prior to issuance of land use permits, Venoco shall prepare a QRA to determine long-term risk of upset potential for the PRC 421 facilities. The QRA should assume the best estimate of life of the project. The QRA shall identify any deficient facilities with potential for creation of hazards associated with production from PRC 421 and processing of oil/gas/water at the Ellwood Onshore Facility and identify any improvements needed to reduce	PRC 421 and EOF	Venoco shall ensure that a QRA is prepared for PRC 421 and facilities altered under the Project (i.e., pipelines, EOF). Venoco shall implement measures recommended in the approved QRA.	Implementation of this measure would ensure that risks from the Project to the public are identified, quantified, and reduced to the extent possible.	City of Goleta, CSLC	Prior to issuance of land use clearances

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	such hazards to acceptable levels The QRA shall be submitted to the California State Lands Commission, City of Goleta, Santa Barbara County Fire Department Fire Protection Division staffs for review and comment prior to approval. Subsequent to approval, Venoco shall implement any modifications to facilities or processes recommended in the QRA.					
Impact S-5: Potential for Release of Oil or Hazardous Materials from the Crude Oil Flowline Project operations could result in the release of oil or hazardous materials from the crude oil flowline as oil is transported from Well 421-2 to the tie-in at the EOF (Less than Significant with Mitigation).	**MM S-5a. Install Pipeline Warning Markers**. Venoco shall modify Project design to include installation of several pipeline markers with reflective warning tape along the 6-inch line to identify the pipeline route and associated excavation hazards. Venoco shall submit the modified Project design to the City of Goleta for review and approval prior to issuance of the Land Use Permit.	At PRC 421	Venoco shall install pipeline warning markers along the 6-inch line to identify the pipeline route and associated excavation hazards.	This measure would reduce the risk of release of oil or hazardous materials by alerting future workers in the area of the pipeline location.	City of Goleta	Prior to the finalizing Project design
	MM S-5b. Develop Emergency Action Plan (EAP)/Update South Ellwood Field EAP. Venoco shall develop and incorporate into the EAP updated descriptions of the pipeline and flowline, detection systems, emergency shutdown, and response procedures specific to the new system prior to the initiation of operation. Venoco shall update the existing South Ellwood Field EAP to include descriptions of the new flowline interconnection with Platform Holly production within the EOF, and other EOF modifications such as the programmable logic controller cabinet, variable speed drive facility, and	At PRC 421 and EOF	Venoco shall include updated descriptions of the pipeline and flow lines, detection systems, emergency shutdown, and response procedures specific to the new system into the EAPs.	Updates to plans and procedures would provide responders with better information to manage emergency conditions.	City of Goleta	Prior to initiation of operation Update notice within two months of initiating operations

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	transformer. Venoco shall submit the EAPs to the City of Goleta and Santa Barbara County Office of Emergency Management for review and approval prior to recommissioning start-up. The City of Goleta and Santa Barbara County Office of Emergency Management shall coordinate updates ~~notice for these revisions shall be provided to the current plan holders within two months of initiating operations~~ of the EAPs with the operator on a regular basis or as conditions change that warrant review of emergency response protocols.					
	MM S-5c. Safety, Inspection, and Maintenance of Oil and Gas Pipelines. Venoco shall prepare a Safety Inspection, Maintenance, and Quality Assurance Program (SIMQAP) or similar mechanism for Project-related pipelines to ensure adequate ongoing inspection, maintenance, and other operating procedures. Any such mechanism shall be subject to approval by the City of Goleta prior to commencement of pipeline operations and provide for systematic updates as appropriate. Requirements shall be commensurate with the level and anticipated duration of the risk. The City of Goleta and Venoco would update the SIMQAP or similar mechanism biennially or sooner if conditions change that warrant review of the program.	At PRC 421 and EOF	Venoco shall ensure that the program is prepared and updated as necessary.	Implementation of this MM would ensure that pipelines are regularly inspected and properly maintained.	City of Goleta	Prior to issuance of land use clearances, and updated biennially or as necessary during operation
Impact S-6: Increased Amount of	**MM HM-3 (Automated Block Valves and an Additional Check Valve on**	At EOF and Line 96	Venoco would demonstrate to	The upgrades improved the	City of Goleta	Prior to initiation of

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Oil or Hazardous Materials Potentially Released from Oil Transfer in Line 96 Project implementation would increase throughput in the Line 96 pipeline, and therefore increase the amount of oil or hazardous materials potentially released (Significant and Unavoidable).	**the Proposed Pipeline)** from the certified Line 96 Modification Project EIR (Santa Barbara County 2011) is incorporated by reference (see Appendix H for details).~~:~~		the satisfaction of the City of Goleta and county of Santa Barbara that the recommended upgrades to the SCADA system have been made.	capability of the SCADA system to accommodate the production from PRC 421.		operation
Impact S-7: Increased Processing of Oil and Gas at the EOF Project implementation would increase processing of oil and gas at the EOF, and therefore increase potential risks related to safety and potential release of hazardous materials (Significant and Unavoidable).	**MM S-5b** would apply to this impact.	See specific MM in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing.				
Impact S-8: Increased Risk of Fire Project implementation would include production and transport of oil and gas from PRC 421 to the EOF, increase	**MM S-8. Fire Prevention and Suppression**. Venoco shall revise the existing Fire Prevention and Preparedness Plan to incorporate the new equipment and operations at PRC 421, and submit to the City of Goleta, Santa Barbara County Fire Department, California Coastal Commission, California Department of	At PRC 421	Venoco shall ensure that the existing Fire Prevention and Preparedness Plan is updated to adequately cover new equipment and	Updating the plan will ensure that emergency procedures are in place to respond adequately to emergencies at the Project site.	CSLC, Santa Barbara County Fire Department, City of Goleta, CCC, Caltrans	Prior to starting Project operations

Table 7-2. Mitigation Monitoring Program—Safety

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
processing of oil and gas at the EOF, and increase transport of oil and gas to market, therefore increasing potential risks related to fire (Less than Significant with Mitigation).	Transportation, and California State Lands Commission staffs for review and approval. The plan shall be revised and provided to the agencies for review prior to commencing operations, and the plan shall be formally updated and circulated within one month of receiving comments from the aforementioned agencies.		operations at PRC 421.			

Table 7-3. Mitigation Monitoring Program—Hazardous Materials

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact HAZ-1: Exposure of Public or Environment to Hazardous Materials The Project would create a potential hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction and/or project operation (Less than Significant with Mitigation).	**MM HAZ-1a. Proper Personnel Training**. Personnel working during the Project's construction, operation, and Pier 421-1 decommissioning and removal phases shall be adequately trained per the requirements included in Venoco's Emergency Action Plan, Oil Spill Contingency Plan, Fire Prevention and Preparedness Plan, Spill Prevention, Control and Countermeasures Plan and other relevant plans. These plans include specific training requirements such that personnel that have the potential to come into contact with contaminated media and/or hazardous materials understand safe work practices, Best Management Practices, and waste management practices, so that a release of hazardous materials can be avoided, controlled, or minimized. Project construction and field personnel shall also be trained to identify possible	At PRC 421	Venoco shall ensure that personnel working on the proposed Project are adequately trained per the requirements contained in the relevant construction and operation planning documents.	Training personnel will ensure that a release of hazardous materials is controlled, minimized, or eliminated.	CSLC, City of Goleta	Prior to starting Project operations

Table 7-3. Mitigation Monitoring Program—Hazardous Materials

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	indicators of a hazardous release, such as hydrocarbon or solvent odors, stained soils, and oily sheens on standing water.					
	MM HAZ-1b. Conduct a Phase I Environmental Site Assessment (ESA). To gain a better understanding of the study area and its potential to have additional, previously unknown releases of hazardous materials or other environmental concerns, Venoco shall perform a Phase I ESA on the study area prior to issuance of land use permits, which shall incorporate information from Santa Barbara County Fire Department Fire Protection Division (FPD) records and files. The results of this study shall be provided to the City of Goleta, FPD, and California State Lands Commission staffs. Conclusions of the Phase I ESA, including any recommendation of a Phase II and subsequent investigation, shall be followed. Any subsequent work plans for soil and groundwater sampling shall be submitted to FPD for review and incorporated into the current and ongoing assessment under their Site Mitigation Unit Site #371.	At PRC 421	Venoco shall conduct a Phase I ESA. Conclusions of the Phase I ESA, including recommendation of a Phase II and subsequent investigation, shall be followed.	Phase I ESA will determine the likelihood of site contamination and whether subsequent investigations are necessary to quantify and remediate any existing contamination.	CSLC, City of Goleta	Prior to Project construction activities
	MM HAZ-1c. Soil Sampling. During construction activities at Pier 421-2 and during Pier 421-1 decommissioning and removal, all soil materials removed shall be presumed to be contaminated and handled accordingly. The soil materials removed from the caisson will be sampled, profiled, and disposed of	At PRC 421	~~Venoco~~ City of Goleta Soils Inspector/Monitor shall ensure that contaminated soils, sediment, or water are disposed of	Properly disposing of contamination will reduce the likelihood of a release to the environment.	CSLC, City of Goleta	Upon generation of waste containing hazardous materials or contamination

Table 7-3. Mitigation Monitoring Program—Hazardous Materials

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	or recycled according to regulatory requirements. During all other Project construction activities, ~~Venoco~~ a City of Goleta Soils Inspector/Monitor shall continually visually monitor the soils disturbed within the construction areas to determine if there is any evidence of undiscovered contamination. The City of Goleta shall hire the Soils Inspector/Monitor, paid for by Venoco, to inspect soil disturbance activities within the City's jurisdiction during all phases of the Project to ensure that any hazardous materials and/or contaminated soils encountered are properly contained and removed. Soil samples may be taken, subject to the direction of the Soils Inspector/Monitor. Any soil suspected of contamination shall be contained on site in appropriate storage container, sampled, profiled, and disposed of or recycled according to regulatory requirements. All soils removed shall be handled in accordance with MM HAZ-1d. All soil sampling results shall be provided to the California State Lands Commission and City of Goleta staffs immediately upon receiving results.		properly and that a Removal Action Plan is prepared, if needed.			
	MM HAZ-1d. Removal Action Plan. If sediment within the Project construction and 421-1 decommissioning areas and surrounding soils is determined to contain total petroleum hydrocarbons or other contaminants above California	At PRC 421	Venoco shall ensure that contaminated soils, sediment, or water are disposed of properly and that	If contamination is determined to be present, a Removal Action Plan will define requirements for proper cleanup	CSLC, City of Goleta, RWQCB, OSPR	Prior to Project construction activities

Table 7-3. Mitigation Monitoring Program—Hazardous Materials

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Ocean Plan thresholds and if such sediments may be exposed, prior to commencing construction activities, Venoco shall prepare a Removal Action Plan for the safe removal of contaminated materials from the structures and surrounding area. The action plan shall be circulated to the City of Goleta, Santa Barbara County Fire Department Fire Protection Division, California State Lands Commission (CSLC) staffs for review and comment. Final approval of the plan shall be under the purview of the California Department of Fish and Wildlife Office of Spill Prevention and Response (OSPR) and/or CSLC staffs. Upon approval, sediments shall be removed from construction areas and disposed of in accordance with procedures described in the Removal Action Plan. However, if OSPR and/or CSLC staffs determine that removal of some contaminated sediments would impair the integrity of Pier 421-2 (includes the well, caisson supporting the well, and the causeway leading to the caisson) (either through complete removal of the soil filling the caisson or having to dig underneath), Venoco shall prepare a Decommissioning Plan to remove those remaining contaminated sediments at such time that Pier 421-2 is decommissioned. All other contaminated sediments whose removal would not threaten the integrity of Pier 421-2 would be removed upon approval of the Plan as described		a Removal Action Plan is prepared, if needed.	and disposal, thereby minimizing risk to the public and environment.		

Table 7-3. Mitigation Monitoring Program—Hazardous Materials

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	above.					
	MM HAZ-1e. Performance Security. The permittee shall provide to the California State Lands Commission (CSLC) and the City of Goleta, or maintain if already provided, performance securities and agreements for work that would need to be performed at the end of the Project's life. The security and agreement provided to CSLC would cover decommissioning and abandonment of the Well 421-1 and Pier 421-2. The performance security total shall be the estimated amount for the decommissioning/ abandonment work. The performance security shall be provided to the CSLC and agreements signed, prior to return to production of the PRC 421 well. The security and agreement provided to the City of Goleta would cover decommissioning and abandonment of the portions of the Project located within the City's jurisdiction, including, but not limited to, the piers, the sea wall supporting the access road, the access road, and the onshore pipelines and cables and ancillary facilities. The performance security total shall be the estimated amount for the decommissioning/abandonment work, less any amount contributed toward overlapping infrastructure that is covered in the securities and agreements with CSLC. The performance security shall be provided	At PRC 421	Venoco shall pay the performance security and formally complete all necessary agreements.	Provision of a performance security and related agreements will ensure that decommissioning and abandonment is completed as promised.	CSLC, City of Goleta	Prior to issuance of land use clearances

Table 7-3. Mitigation Monitoring Program—Hazardous Materials

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	to the City of Goleta and agreements signed prior to the issuance of the Land Use Permit.					
Impact HAZ-2: Release of Contaminated Sediment from the Caisson on Pier 421-2 during Operation of the Project Contaminated sediment contained within the caisson structures could infiltrate to the surrounding environment (Less than Significant with Mitigation).	**MMs GEO-4a, Corrosion Protection Design Specification, MM GEO-4d, Inspect Structures During and/or After Storm Events, and MM S-2a, Design Review/ Wave Loading Evaluation**, shall be employed to ensure the integrity of the structure. Results from the Phase I and any subsequent Phase II ESAs described in MM HAZ-1b would provide information on the nature and extent of any pre-existing contamination from past site operations.	At PRC 421	Venoco shall ensure that appropriate engineering design reports are completed to address identified structural design issues and that project design incorporates all recommended design features.	MMs will identify environmental issues with existing contamination in the Project area and ensure the integrity of the caisson structures, thereby decreasing the potential for a release of contaminated sediment	CSLC, City of Goleta	Various

Table 7-4. Mitigation Monitoring Program—Air Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact AQ-1: Increase in Emissions from Construction Project construction could potentially result in increased emissions at the Project site (Less than Significant).	**MM AQ-1a. Prohibit Unnecessary Truck Idling**. The construction contractor shall limit unnecessary truck idling on site in excess of five minutes.	At PRC 421	Project contractor should ensure that unnecessary truck idling is prohibited by including the MM in the construct-ion site manage-ment plan.	Prohibiting unnecessary idling will reduce emissions from trucks.	APCD	Prior to initiating, and during, construction activities
	MM AQ-1b. Use of Diesel Emission Reduction Measures. The construction contractor shall implement	At PRC 421	Project contractor should ensure that diesel	Implementing diesel emission reduction	APCD	During construction activities

Table 7-4. Mitigation Monitoring Program—Air Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	the following measures, as feasible. • Diesel construction equipment meeting the California Air Resources Board (CARB) Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards should be used to the maximum extent feasible. • Diesel powered equipment should be replaced by electric equipment whenever feasible. • If feasible, diesel construction equipment shall be equipped with selective catalytic reduction systems, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by the U.S. Environmental Protection Agency (EPA) or California. • Catalytic converters shall be installed on gasoline-powered equipment, if feasible. • All construction equipment shall be maintained in tune per the manufacturer's specifications. • The engine size of construction equipment shall be the minimum practical size. • The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time. • Construction worker trips should be minimized by requiring carpooling		emission reduction measures are implemented by using equipment with diesel particulate filters or oxidation catalysts and using emulsified diesel fuel in construction equipment, as specified. Project monitor should confirm use of approved equipment.	measures will reduce emissions from construction equipment.		

Table 7-4. Mitigation Monitoring Program—Air Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	and by providing for lunch onsite.					
	MM AQ-1c. Maintain Construction Equipment. All construction equipment shall be properly maintained according to manufacturers' specifications.	At PRC 421	Project contractor should ensure that all equipment is properly maintained. Project monitor should confirm adherence to approved maintenance schedule.	Properly maintained equipment emits fewer emissions than equipment that is not maintained.	APCD	During Project construction
	MM AQ-1d. Compliance with State Portable Air Toxics Control Measure. Any portable diesel engines greater than 50 horsepower used in construction shall comply with the State Portable Air Toxics Control Measure and be certified to Tier 1, 2, or 3 non-road engine standards.	At PRC 421	Project contractor should use ultra-low sulfur fuel, as specified. Project monitor should confirm use of approved fuel.	Utilizing ultra-low sulfur fuel will reduce the sulfur content of equipment emissions.	APCD, City of Goleta	During Project construction
	MM AQ-1e. Establish On-Site Equipment Staging Area and Worker Parking Lots. The staging area and worker parking lots shall be restricted to either paved surfaces or soil stabilized unpaved surfaces only.	At PRC 421	Project contractor should establish on-site equipment staging areas and worker parking lots, as detailed. Project monitor should ensure compliance with this measure.	Properly designed staging areas and parking lots minimize dust generation.	APCD, City of Goleta	Prior to starting Project construction activities
	MM AQ-1f. Fugitive Dust Management. Venoco shall implement the following measures in accordance with requirements of the Santa Barbara Air Pollution Control District. • During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp		Project contractor should adhere to the dust reduction practices listed in the measure.	Implementing MM would reduce fugitive dust generation.	APCD, City of Goleta	During Project construction

Table 7-4. Mitigation Monitoring Program—Air Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption. • Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less. • If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin. • Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads. • After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur. • The contractor shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary,					

Table 7-4. Mitigation Monitoring Program—Air Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.					
Impact AQ-4: Project Would Result in a Net Increase in GHG Emissions Project oil and gas production and drilling and construction would increase GHG emissions. (Less than Significant with Mitigation)	**MM AQ-4 Greenhouse Gas Monitoring and Reduction Strategies.** The Applicant shall be required to quantify and report annually the greenhouse gas (GHG) emissions associated with Project operations using methodologies prescribed for the California Climate Action Registry General Reporting Protocol, the California Air Resources Board (CARB) Compendium of Emission Factors and Methods to Support Mandatory Reporting of Greenhouse Gas Emissions (CCAR 2009, CARB 2007c) and the U.S. Environmental Protection Agency (EPA) Mandatory Reporting of Greenhouse Gases annual reports. Copies shall be provided to the California State Lands Commission (CSLC) and Santa Barbara County Air Pollution Control District (APCD) staffs, including a reporting of all mitigation measures applied. In addition, Venoco shall prepare and submit a GHG emission reduction program to CSLC staff for review and approval prior to ~~issuance of the Land Use Permit~~commencement of construction.	At PRC 421 and Ellwood Onshore Facility	Applicant shall annually report GHG emissions and effectiveness of mitigation measures to CSLC and APCD and applicant shall prepare and submit a GHG reduction program to CSLC	Offset of GHG emissions to zero net increase.	CSLC	Prior to construction and ongoing throughout project operation

Table 7-4. Mitigation Monitoring Program—Air Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Venoco shall ~~implement the approved GHG emission reduction program~~ detail specific measures to reduce net GHG emissions to zero on an annual basis over the life of the Project. Annual updates shall specify any changes in such measures required to meet targeted reductions. The following measures, or their equivalent, shall be used individually or in combination to achieve such reductions: • On-site increased equipment efficiencies or operational modifications such as using more efficient de-watering systems at the EOF or other measures to reduce the need for crude heating; • Implementation of off-site GHG reduction programs in Santa Barbara County as approved by the APCD; and/or • Purchase of "credits" ~~from a source~~ or offsets through existing adopted plan or mitigation program such as CARB's Cap-and-Trade program or Climate Action Reserve, the City of Goleta's Climate Action Plan, or other equivalent approved or certified program that is verified by the CSLC staff or CARB.					

Table 7-5. Mitigation Monitoring Program—Hydrology, Water Resources, and Water Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact WQ-1: Temporary Construction Impacts to Marine Water Quality Short-term construction activities along the access road and seawall, and in the surf zone could adversely affect marine water quality (Less than Significant with Mitigation).	**MM WQ-1a. Avoidance of High Tides and Silt Curtain**. Venoco shall schedule in-water construction efforts to avoid times of high tides (defined herein as tides greater than +5 feet as predicted by the National Oceanic and Atmospheric Administration). Prior to implementation of any in-water construction, affected sediments shall be tested for the presence of hydro-carbons and trace metals. Any potentially contaminated sediment which may be disturbed during caisson repairs would be contained within the Project area for off-site disposal at an appropriate waste facility, and disposed of according to State and Federal regulation. Regardless of the presence of contaminated sediment, Venoco shall install measures to reduce siltation of the nearshore marine environment during in-water construction, potentially including but not limited to a silt curtain, installation of sheet piling, and/ or soil removal techniques such as hydro-displacement and weighted floating. Venoco shall prepare a plan to monitor the performance of the adopted measure and identify thresholds for localized turbidity to ensure that they are performing as expected and not impairing water quality. If it is found that turbidity threshold values are being repeatedly exceeded, construction activities shall be temporarily halted until a better capture solution is implemented. Additionally, in order to	At PRC 421	Venoco shall ensure construction activities are schedules appropriately and that a silt curtain or other silt containment method is used during in-water construction activities and that contaminated materials are disposed of properly	Appropriate scheduling and use of a silt curtain or other silt containment methods will reduce the risk of short-term construction impacts on marine water quality	CSLC, City of Goleta	Prior to in-water construction activities

Table 7-5. Mitigation Monitoring Program—Hydrology, Water Resources, and Water Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	protect spawning endangered species, monitoring should occur to ensure that a turbidity plume from construction in the marine environment does not reach the mouth of Bell Creek or Tecolote Creek and that turbidity in the lagoon does not increase as a result of construction activities. If a plume reaches the mouth of the lagoon, construction should be halted until turbidity returns to normal levels.					
	MM WQ-1b. Water Quality Certification. Venoco shall complete and implement a Spill Prevention, Control and Countermeasures (SPCC) Plan and implement any additional MMs mandated by the State Water Resources Control Board (SWRCB) through the Section 401 water quality certification process.	At PRC 421	Venoco shall implement SPCC Plan and any additional MMs mandated by SWRCB through 401 water quality certification process.	Implementation of MMs above and those mandated by the SWRCB would reduce potential water quality impacts to below State thresholds.	CSLC, SWRCB	Prior to in-water construction activities
Impact WQ-2: Temporary Construction Impacts to Wetlands Short-term construction activities along the access road and could adversely affect water quality in adjacent wetlands (Less than Significant with Mitigation).	**MM WQ-2. Wetland Delineation, Avoidance and Minimization**. Venoco shall engage a qualified biologist to conduct a Wetland Delineation and prepare a Wetland Delineation Report, subject to approval and permitting by the City of Goleta, California Department of Fish and Wildlife, Army Corps of Engineers, and California Coastal Commission, to determine the precise location of all wetlands within and in the vicinity of the Project, including the access road, the flow line, the cables, sea wall bulkheads, and riprap sea-walls. The Report shall be reviewed and approved prior to City issuance of the Land Use Permit. Prior to commencement of construction, all	At PRC 421	Venoco shall delineate provide measures to avoid impacts to any identified wetlands during construction and operation of the Project, and any necessary post-construction restoration actions for any temporary disturbance to the wetlands.	Identification of wetlands and appropriate conservation measures would reduce impacts to wetlands and sensitive habitats.	City of Goleta, CDFW, CCC, RWQCB, USACE	Prior to any Project construction

Table 7-5. Mitigation Monitoring Program—Hydrology, Water Resources, and Water Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	wetland areas located within and adjacent to the Project area will be flagged for fencing by a qualified wetland scientist. If wetlands identified in the Wetland Delineation Report cannot be avoided, the Applicant shall consult with appropriate agencies including the City of Goleta, California Department of Fish and Wildlife, California Coastal Commission, and the Regional Water Quality Control Board to design measures to minimize impacts to the wetland and appropriate restoration standards and methods, if necessary following construction.					
Impact WQ-3: Oil Spill Impacts to Surface and Marine Water Quality Accidental discharge of petroleum hydrocarbons into the surf zone from Pier 421-2 and flowline would adversely affect surface or marine water quality (Significant and Unavoidable).	**MM WQ-3a. Pipeline Monitoring**. In addition to the installed safety measures on the pipeline from Pier 421-2 to the EOF tie-in (e.g., low-pressure alarm system and automatic shut-in), Venoco staff shall conduct daily visual monitoring of the access road above the pipeline and soils adjacent to the access road. Staff shall inspect for obvious indicators of a small leak such as petroleum smells and any seepage of oil or visible sheen in soils adjacent to the roadway. If any indicators are present, Venoco shall (1) notify City of Goleta and California State Lands Commission (CSLC) staffs within 24 hours, (2) conduct further investigations to determine the source of the indicator, and (3) repair the pipeline as necessary upon City and CSLC staff approval.	Along the pipeline in the access road	Venoco shall inspect the pipeline and provide the report and any indications of a leak to the City of Goleta and CSLC. If any indicators are present Venoco shall conduct further investigations to determine the source of the indicator and conduct repairs as necessary.	Regularly inspecting the pipeline will ensure that leaks are detected early and would prevent large releases of oil.	City of Goleta, CSLC	During Project operation
	MM WQ-3b. Storm Water Pollution Prevention Plan (SWPPP). A site-specific SWPPP shall be prepared for	Venoco Offices	Venoco shall prepare a site-specific SWPPP	The Plan will prevent releases of contaminants	RWQCB, City of Goleta	Prior to implementing Project

Table 7-5. Mitigation Monitoring Program—Hydrology, Water Resources, and Water Quality

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	construction activities and the existing Ellwood area SWPPP shall be updated to include the Project and submitted to the Regional Water Quality Control Board (RWQCB), Central Coast Region, and City of Goleta to prevent adverse impacts to nearby waterways associated with oil spills and contaminated storm water releases not covered under the Emergency Action Plan (EAP), which only applies to "significant events." This plan shall include site-specific diagrams illustrating primary surface drainage features (e.g., Bell Canyon Creek, Devereux Creek and Devereux Slough, and proposed spill containment, delineation of drainage features) and a description of Best Management Practices (BMPs), including spill containment equipment and procedures tailored for the Project site.		and submit it to the Central Coast RWQCB.	and sediment to nearby waterways.		activities
Impact WQ-4: Cumulative Impacts to Marine Water Quality Potential oil spills occurring as a result of recommissioning of PRC 421 could result in contributions to cumulative water quality impacts on the waters of the Santa Barbara Channel (Significant and Unavoidable).	Each of these projects must meet regulatory requirements designed to reduce the probability and consequences of accidental releases to the environment. However, even the best-designed and implemented MMs, such as safe design of the facilities, oil spill contingency plans, training and drills, and availability of oil spill cleanup means, cannot eliminate all risk of an oil spill.	Santa Barbara Channel	Implementation of standard regulatory process.	Permits obtained and regulator processes adhered to.	Local, State and Federal agencies	Ongoing

Table 7-6. Mitigation Monitoring Program—Marine Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact MBIO-1: Disturbance to Intertidal Organisms during Construction Construction activities during recommissioning activities at Pier 421-2 and following decommissioning and removal of Pier 421-1 would disturb and kill intertidal invertebrates and might dislodge grunion eggs (Less than Significant with Mitigation).	**MM MBIO-1. Avoid Caisson Repair on Pier 421-2 and Removal of Pier 421-1 during Grunion Spawning Season**. Project activities that require equipment access on the beach shall be scheduled to avoid, to the extent possible, anticipated California grunion runs. In the event that construction will occur during the seasonally predicted run period and egg incubation period for California grunion as identified by the California Department of Fish and Wildlife, a Project Biological Monitor, hired by the City of Goleta and paid by Venoco, shall be present on the Project site each night, for the entire night, from one night before the beginning of each seasonally predicted grunion run until one night after the end of each run to monitor the presence of grunion on the site. If any adult grunion are observed at the Project site, no construction activities requiring equipment access within the area of the observed grunion will be allowed until after the next predicted grunion run (or two weeks after the last run in August) in which no adult grunion have been observed on the Project site, unless otherwise approved by the California State Lands Commission staff.	Project Caissons	Venoco to coordinate with City of Goleta, CSLC, and CDFW on timing of Caisson repairs outside of grunion season. Project biological monitor to oversee construction.	Caisson repairs occur outside grunion runs. Construction avoids documented grunion spawning areas.	City of Goleta, CSLC, CDFW	During Project construction
Impact MBIO-2: Impacts to Marine Organisms from Sediment Resuspension in the Near-Shore Zone	Implement **MMs WQ-1a through WQ-1b and MMs HAZ-1c through HAZ-1-d**.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				

Table 7-6. Mitigation Monitoring Program—Marine Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
due to Disturbance of Sediments during Construction Activities during construction activities such as caisson repairs on non-seaward facing walls on Pier 421-2 and later decommissioning and removal of Pier 421-1 would have the potential to resuspend sediments in near-shore waters due to the disturbance of beach sediments. Resuspension of sediment, particularly contaminated sediments, could have adverse impacts on marine organisms (Less than Significant with Mitigation).						
Impact MBIO-4: Oil Spill Impacts to Marine Resources Leaks and spills of petroleum hydrocarbons into the ocean could adversely affect marine organisms (Significant and Unavoidable).	**MM MBIO-4a. Update South Ellwood Field Oil Spill Contingency Plan (OSCP) to Address a Spill from Lease PRC 421 Oil Production**. Prior to beginning construction at PRC 421 and prior to the City of Goleta's issuance of the Land Use permit, Venoco shall update the South Ellwood Field OSCP to address protection of sensitive biological resources disturbed during an oil spill or cleanup activities. The revised OSCP shall include specific measures to avoid impacts on	Ellwood Area	Venoco shall coordinate with CSLC, CDFW, the County, the City and Coal Oil Point Reserve on preparation of the OSCP.	The OSCP is updated and approved by all affected agencies.	CSLC, CDFW, Santa Barbara County, City of Goleta	Prior to Project operation

Table 7-6. Mitigation Monitoring Program—Marine Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Federal- and State-listed endangered and threatened species, and shall specifically identify training and procedures to contain oil spilled from production at Lease PRC 421. The OSCP shall identify sensitive resources, including the birds on the Bird Island platforms, kelp beds offshore the piers, intertidal and subtidal resources within the Campus Point SMCA such as those at Coal Oil Point, the harbor seal rookery at Burmah Beach and Naples Reef, and the Naples MPA that could be oiled rapidly from a spill on PRC 421. Rapid response procedures to protect those sensitive resources shall be identified. Venoco shall submit the updated South Ellwood Field and OSCP to the California State Lands Commission, Department of Fish and Wildlife Office of Spill Prevention and Response, California Coastal Commission, Santa Barbara County, and City of Goleta staffs for review and approval prior to operation of the recommissioned facilities.					
	MM MBIO-4b. Develop a Protection Plan to Keep Birds Roosting on Bird Island from Harm in the Event of an Oil Spill on Lease PRC 421. Prior to starting construction at PRC 421 and prior to the City of Goleta's issuance of a Land Use Permit, Venoco shall engage a biologist experienced with wildlife and bird rehabilitation to determine whether it is necessary to develop a plan specifically to protect	Ellwood Area	Venoco to coordinate with CSLC and CDWF and selected wildlife rehabilitation expert on need for preparation of Bird Island Protection Plan.	The protection plan, if necessary, is approved by CSLC and CDFW and provides clear measures to avoid disturbance of or harm to birds	CSLC, CDFW, City of Goleta	Prior to Project operation

Table 7-6. Mitigation Monitoring Program—Marine Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	pelicans and cormorants roosting on the Bird Island platforms from harm in the event of an oil spill. The biologist shall submit a memorandum explaining their position to the California State Lands Commission staff for review and approval. If the biologist deems plan preparation necessary, Venoco shall include this plan within the revised OSCP, potentially including methods to deter the birds from feeding or resting in oiled waters. The plan also shall include procedures to capture and rehabilitate oiled birds. If the plan is deemed necessary, Venoco shall submit the Plan to the California State Lands Commission, California Coastal Commission, Santa Barbara County, and City of Goleta staffs for review and approval prior to operation of the recommissioned facilities.			using Bird Island.		
Impact MBIO-5: Oil Spill Impacts to Commercial and Recreational Fishing Accidental discharge of petroleum hydrocarbons into marine waters would adversely affect commercial and recreational fishing (Significant and Unavoidable).	Implementation of MMs identified in Sections 4.2, Safety; 4.5, Hydrology, Water Resources, and Water Quality; and 4.7, Terrestrial Biological Resources, for contingency planning and spill response would be required.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				
Impact MBIO-7: Cumulative Impacts of an Oil Spill on Marine Resources	Implementation of **MMs MBIO-4a and MBIO-4b** would be required.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				

Table 7-6. Mitigation Monitoring Program—Marine Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Oil development at PRC 421 would add to the cumulative risk that marine resources would be impacted by one or more oil spills (Significant and Unavoidable).						

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact TBIO-1: Short-Term Construction Impacts to Biological Resources Construction activities associated with installation of underground cables, repair of pipelines, recommissioning of Pier 421-2, and decommissioning and removal of Pier 421-1 and related infrastructure may impact existing wetlands along the project access road and nearby ESHAs (Less than Significant with Mitigation).).	**MM TBIO-1a. Locate Power Cables and Pipeline Outside ESHA**. To the maximum extent feasible, Venoco shall locate new power cables and pipeline repair activities outside existing wetland areas and wetland buffers (defined as undeveloped lands surrounding wetlands) along the access road. A wetland delineation shall be performed in accordance with MM WQ-2. The delineation report and related restoration plan, if required, will establish construction avoidance techniques and restoration where impacts cannot be avoided. The City of Goleta requires a minimum 3 to 1 ratio for wetland or wetland buffer impacts. The wetland delineation, wetland protection plan, and related restoration plan shall be prepared by Venoco for the City of Goleta and Coastal Commission comment and final approval prior to issuance of the City's Land Use Permit. To protect adjacent	PRC 421 access road	Project biological monitor shall ensure that fencing is installed around all sensitive wetland areas, and that all construction avoids these protected areas.	No intrusion of construction activities into protected areas.	CSLC, City of Goleta	During Project construction

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	small wetlands from disturbance, the inland edge of the access road shall be fenced prior to commencement of construction activities. Any unavoidable intrusion of construction activities into this area shall only be performed under the supervision of a City of Goleta-approved biologist. Venoco shall also engage a qualified biologist to prepare a Native Habitat and Special Status Species Survey and Protection Plan (Protection Plan) to be submitted to the City of Goleta and the California Coastal Commission for review and approval prior to the issuance of the City's Land Use Permit. The Protection Plan will map and describe accurate locations of resources in the City's jurisdiction, from the mean high tide line north to Hollister Avenue, in the context of the Project features and all construction staging, laydown, stockpile, and parking areas and shall identify methods to avoid or reduce related impacts to sensitive biological resources and resource buffers. Protection measures will include, at a minimum, a requirement for pre-construction surveys, worker training, the presence of the Project Biological Monitor during all construction activities, and authorization of the Project Biological Monitor to stop work if threats to any sensitive species or habitats are identified during monitoring.					
	MM TBIO-1b. Project Biological Monitors. The City of Goleta shall hire	PRC 421 access	The monitor shall oversee the	Sensitive wetland areas are	CSLC, City of Goleta	Throughout Project

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	a Project Biological Monitor, paid for by Venoco, to supervise pipeline and cable installation, and oversee all construction activities that cross sensitive biological areas and habitat restoration and enhancement activities. The Project Biological Monitor shall ensure that damage to any sensitive wetland habitat within or adjacent to construction zones is minimized. The Project Biological Monitor and the project engineer shall clearly designate "sensitive resource zones" on the project maps and construction plans, which would include the mouth of Bell Canyon Creek. Sensitive resource zones shall be defined in the Native Habitat and Special Status Species Survey and Protection Plan (required under MM TBIO-1a), to avoid impacts to special status biological resources. If the Project Biological Monitor determines that birds are nesting and/or breeding in the Project vicinity, Venoco shall cease Project activities that may affect these birds during the breeding season.	road	installation and maintenance of temporary fencing around sensitive habitats and ensure that construction activities do not intrude into or damage these areas.	protected from damage.		construction
	MM TBIO-1c. Restoration Plan/ Restoration. Venoco shall submit a Restoration Plan~~,~~ prepared by a consultant specializing in restoration ecology to the City, California State Lands Commission, California Coastal Commission, and California Department of Fish and Wildlife staffs for review and approval prior to the issuance of the City's Land Use Permit. The Restoration Plan shall include at	PRC 421 access road, EOF	The project biologist shall document any disturbance to native habitats and provide recommendations on and oversight of restoration activities.	Disturbed native habitats are restored.	CSLC, City of Goleta	Four weeks prior to completion of Project construction

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	least the following elements and shall be consistent with the wetland-specific guidance and Native Habitat and Special Status Species Survey and Protection Plan associated with implementation of MM WQ-2a and TBIO-1a. a. Venoco shall restore any plant communities disturbed by Project construction activities within 90 days of completion of Project construction in conformance with the City-approved Restoration Plan. b. The Plan shall include criteria for evaluating success of restoration efforts and contingencies in the event efforts and not successful. c. Any salvaging and replanting of existing native vegetation shall be undertaken as much as feasible at the direction of the Project Biological Monitor. d. Only native locally derived vegetation and seeds shall be planted in project restoration areas. e. Monitoring and reporting of restored sites by the Project Biological Monitor biologist shall occur for a minimum of 5 years after Project completion, with changes made as necessary based on annual monitoring reports.					
	MM TBIO-1d. Protect Stockpiles of Excavated Material. In addition to Best Management Practices identified in the State Water Resource Control Board 401 certification, materials excavated to install the underground cables shall be stockpiled in such a way that they will	PRC 421 access road, EOF	The monitor shall ensure proper stockpiling of material to avoid any disturbance to native habitats.	Wetlands are protected from stockpiled fill material.	CSLC, City of Goleta	During Project construction

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	not inadvertently spill into or be washed into wetland areas. Stockpile areas shall be located at least 100 feet from delineated wetlands. Drainages and any riparian areas shall be prohibited from use for disposal or temporary placement of excess fill. The Project Biological Monitor shall ensure compliance with this mitigation measure during construction monitoring activities.					
	MM TBIO-1e. Equipment Use, Storage, and Maintenance. Prior to issuance of the Project Land Use Permit, Venoco shall submit an equipment use, storage, and maintenance work plan to the City of Goleta and California State Lands Commission staffs for review and approval. The work plan shall include at least the following elements. a. Heavy equipment and construction activities shall be restricted to the defined construction right-of-way. Vehicles and personnel shall only use existing access roads to the maximum degree feasible. b. Emergency provisions shall be in place at all drainage crossings prior to the onset of construction to deal with accidental spills. c. All equipment used on site and in or near drainages shall be maintained such that no leaks of oil, fuel, or vehicle residues will take place. d. Provisions shall be in place to remediate any accidental spills. e. All machinery shall be stored and	PRC 421	The project contractor shall ensure that all equipment is properly maintained. The project monitor will verify the appropriate maintenance occurs.	Accidental leaks and spills are avoided or cleaned up.	CSLC, City of Goleta	During Project construction

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	fueled in designated locations, such as the equipment laydown areas next to the Ellwood Onshore Facility, as specified in previous sections.					
	MM TBIO-1f. Biological Enhancement Activities. Where possible (e.g., not including steep slopes adjacent to the roadway), existing native habitats within 100 feet of the proposed trenching activities shall be enhanced in terms of their biological value through removal of invasive, non-native species and the planting of appropriate native species. Enhancement activities are to include removal of the non-native giant reed (*Arundo donax*) and other invasive species identified by the Project Biological Monitor. Hand-removal of above-ground stalk and rhizome biomass shall be undertaken to prevent damage to adjacent native plants. Monitoring and reporting of restored sites by the Project Biological Monitor shall occur for a minimum of 5 years after Project completion, with changes made as necessary based on annual monitoring reports.	Three small wetlands along PRC 421 access road and Bell Canyon Creek Estuary	The Project Biologist shall identify all clumps of Arundo or other highly invasive species along access road and in Bell Canyon Creek Estuary and oversee their removal.	Highly invasive non native species are removed.	CSLC, City of Goleta	Prior to completion of Project construction
Impact TBIO-2: Oil Spill Impacts to Terrestrial Biological Resources An accidental oil spill and subsequent cleanup efforts during operation of the Project would potentially result in the	**MM TBIO-2a. Oil Spill Contingency Plan (OSCP) Measures Regarding Protection of Biological Resources**. Before re-starting production at PRC 421, Venoco shall revise and update the OSCP to address protection of sensitive biological resources disturbed during an oil spill or cleanup activities. The revised OSCP shall, at a minimum, include: (1) specific measures to avoid	PRC 421 and Ellwood Coast area	Venoco shall prepare a revised EAP that permits training and provides funding for the two understaffed agencies most responsible for oversight of the	A revised OSCP is submitted and approved by concerned agencies and adequate funding is provided to local agencies.	CSLC, OSPR, CCC, Santa Barbara County, and City of Goleta	Prior to Project operation

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
loss or injury of threatened, endangered, or candidate species such as the Western snowy plover; the loss or degradation of functional habitat value of sensitive biological habitats such as coastal wetlands; or cause a substantial loss of a population or habitat of native fish, wildlife, or vegetation (Significant and Unavoidable).	impacts on Federal- and State-listed endangered and threatened species and Environmentally Sensitive Habitat Areas (ESHAs) during response and cleanup operations; (2) identify, feasible, low-impact, site-specific, and species-specific techniques; (3) identify standards of a spill response personnel training program; (4) funding (up to $5,000 each) for City and Coal Oil Point Reserve updates to multi-hazard response plans and other emergency response documents (e.g., those for Coal Oil Point Reserve) to ensure clear internal and inter-agency communication in the event of an accident and for spill clean-up/restoration; and (5) provide one-time training and a brief checklist regarding the OSCP and the Emergency Action Plan for Neighborhood Services and Public Safety Department and Planning and Environmental Review Department, and the staff of the Coal Oil Point Reserve. Venoco shall submit the updated OSCP to the California State Lands Commission, Department of Fish and Wildlife Office of Spill Prevention and Response, California Coastal Commission, Santa Barbara County, and City of Goleta staffs for review and approval prior to operation of the recommissioned facilities.		sensitive biological resources potentially affected by a Project-related oil spill.			
	MM TBIO-2b. Oil Spill Contingency Plan (OSCP) Measures Regarding Habitat Protection and Restoration. Before re-starting production at PRC 421, Venoco shall revise and update	PRC 421 and Ellwood Coast area	Venoco shall revise the OSCP to address revegetation of any areas	A revised OSCP is submitted and approved by concerned agencies and	CSLC, Santa Barbara County, City of Goleta	Prior to Project operation

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	the OSCP to address revegetation of any areas disturbed during an oil spill or cleanup activities. The revised OSCP shall include: (1) preemptive identification of access and egress points, staging areas, and material stockpile areas that avoid sensitive habitat areas; (2) stipulations for development and implementation of site-specific habitat restoration plans and other site-specific and species-specific measures; (3) identification of sources for restoration project implementation (e.g., restoration contractors, seed vendors, native plant nursery facilities, academic institution support); (4) procedures for timely re-establishment of vegetation; (5) monitoring procedures and minimum success criteria to be satisfied for restoration areas; (6) funding (up to $5,000 each) for City and Coal Oil Point Reserve updates to multi-hazard response plans and other emergency response documents to ensure clear internal and inter-agency communication in the event of an accident and for spill clean-up/restoration; and (7) provide one-time training a brief checklist regarding the OSCP and the Emergency Action Plan for Neighborhood Services and Public Safety Department and Planning and Environmental Review Department. Venoco shall submit the updated OSCP to the California State Lands Commission, Department of Fish and Wildlife Office of Spill Prevention and		disturbed during an oil spill or cleanup activities.	adequate funding are provided to local agencies.		

Table 7-7. Mitigation Monitoring Program—Terrestrial Biological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Response, California Coastal Commission, Santa Barbara County, and City of Goleta staffs for review and approval prior to operation of the recommissioned facilities.					
Impact TBIO-3: Cumulative Impacts to Terrestrial Biological Resources Potential oil spills occurring as a result of recommissioning Pier 421-2 could result in contributions to cumulative terrestrial biological resource impacts (Significant).	**MMs TBIO-2a and -2b** would apply to this impact.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				

Table 7-8. Mitigation Monitoring Program—Land Use, Planning, and Recreation

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact LU-1: Conflicts with Goleta General Plan/Coastal Land Use Plan and underlying Coastal Act Policies Production of oil and gas at PRC 421 would increase the potential for accidental releases of oil into the environment and conflict with policies contained within the Goleta General	**MM LU-1a. Obtain Property Owner Authorizations**. Prior to issuance of any Land Use Permit, Venoco shall secure all required property owner authorizations or other documentation, including encroachment permits or easements to the satisfaction of the City of Goleta allowing the project on or within property not owned by the permittee, including, but not limited to property owned by Sandpiper Golf Trust and the City.	N/A	Venoco shall present documentation of all necessary authorizations.	Confirming authorizations will avoid unauthorized land uses.	City of Goleta, CSLC	Prior to issuance of land use clearances.
	MM LU-1b. Obtain Permits Required by Title 15 of Goleta Municipal Code. Venoco shall obtain from the City's	N/A	Venoco shall present documentation	Confirming permits will avoid unauthorized	City of Goleta, CSLC	Prior to issuance of land use

Table 7-8. Mitigation Monitoring Program—Land Use, Planning, and Recreation

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Plan/Coastal Land Use Plan (GP/CLUP) Land Use, Open Space, or Conservation Elements and relevant underlying Coastal Act policies (Significant and Unavoidable).	Planning and Environmental Review Department all Building, Electrical, Well or other Permits required by Title 15 of the Goleta Municipal Code prior to the construction, erection, moving, alteration, enlarging, rebuilding of any building, structure, or improvement, or any other action(s) requiring a Building Permit pursuant to Title 15 of the Goleta Municipal Code.		that all necessary permits have been received.	land uses.		clearances.
	MM LU-1c. Obtain City Land Use Permit Prior to Development. The permittee shall obtain from the City's Planning and Environmental Review Department a Land Use Permit prior to commencement of any uses and/or development authorized by this permit.	N/A	Venoco shall ensure receipt of the necessary land use permit.	Ensuring permitting prior to development allows for implementation of mitigation.	City of Goleta, CSLC	Prior to start of Project development.
Impact LU-2: Oil Releases Could Affect Recreational Activities High-quality recreational resources are located within the area and could be impacted by the spread of oil from an accidental release from surf zone production activities at Pier 421-2, associated pipelines, and transportation by the Line 96 pipeline. Shoreline and water-related uses would be disrupted by oil on the shoreline and in the	Implementation of those MMs identified in Sections 4.1, Geological Resources; 4.2, Safety, 4.3 Hazardous Materials; 4.5, Hydrology, Water Resources, and Water Quality; 4.6, Marine Biological Resources, and 4.7, Terrestrial Biological Resources, reinforcement of caisson containment walls, and contingency planning and spill response.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				

Table 7-8. Mitigation Monitoring Program—Land Use, Planning, and Recreation

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
water, resulting in significant impacts to on- and off-shore public recreation (Significant and Unavoidable).						
Impact LU-3: Oil Releases from Pier 421-2 or Pipelines Could Affect Sensitive Area Resources and Raise Consistency Issues with Adopted Policies. Spills that reach the shore along sensitive land use areas or heavily used areas, including recreational areas, would limit or preclude such uses and result in significant adverse impacts (Significant and Unavoidable).	Implementation of those MMs identified in Sections 4.2, Safety; 4.5, Hydrology, Water Resources, and Water Quality; 4.6, Marine Biological Resources, and 4.7, Terrestrial Biological Resources, for reinforcement of caisson containment walls, and contingency planning and spill response.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				
Impact LU-4: Cumulative Impacts of Potential Project-Related Oil Spills on Area Land Use and Recreational Uses Impacts to sensitive shoreline lands, and/or water and non-water recreation due to a release of oil would result in	Implementation of those MMs identified in Sections 4.2, Safety; 4.5, Hydrology, Water Resources, and Water Quality; 4.6, Marine Biological Resources; and 4.7, Terrestrial Biological Resources, for reinforcement of caisson containment walls, and contingency planning and spill response would be required.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				

Table 7-8. Mitigation Monitoring Program—Land Use, Planning, and Recreation

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
potentially significant impacts. When the cumulative environment is considered, the contribution from the Project could be significant (Significant and Unavoidable).						

Table 7-9. Mitigation Monitoring Program—Public Services

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact PS-1: Adequacy of Fire Response The incremental increase for fire protection services caused by reactivating oil production in an area which is currently under-serviced with difficult and limited accessibility contributes to the need for new and/or expanded fire inspection and protection services in western Goleta (Significant and Unavoidable).	**MM PS-1. Impact Development Fee**. Venoco shall provide an impact development fee payment to the City of Goleta that would be directed toward fire response improvements. The fee would be determined based on the County of Santa Barbara's Development Fee Ordinance (County Ordinance 4745), which assesses a fee of $1,007.00 per 1,000 sf for non-retail commercial development in Fiscal Year 2013-2014. For the purposes of determining the fee, the Project area would consist of the PRC 421 piers, pipeline corridor, and roadbed, which has a total cost of $26,168. Fire response upgrades, which may include maintenance of a 12-foot-wide all-weather access road and installation of portable fire extinguishers, shall be implemented per Santa Barbara County Fire Department (SBCFD) requirements. Venoco shall also obtain a hot-work permit from SBCFD before	At PRC 421	Venoco shall pay an impact development fee to the City of Goleta. CSLC will identify the fee as part of final approval of this project.	The impact fee will help pay for the construction of a new fire station that could service the project site.	CSLC, SBCFD, and City of Goleta	Upon Project approval

Table 7-9. Mitigation Monitoring Program—Public Services

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	any hot-work operations on the Project.					
Impact PS-2: Operation without an Approved Fire Prevention Plan Operating PRC 421 without an approved fire protection plan could result in an unsafe situation if an emergency requiring response by Venoco or the Santa Barbara County Fire Department were to occur (Less than Significant with Mitigation).	**MM PS-2. Prepare Fire Prevention Plan for PRC 421**. Prior to re-starting oil and gas production at PRC 421, Venoco shall prepare a fire prevention plan that includes fire prevention strategies for the Project area. The plan may either be in the form of a stand-alone plan for the PRC 421 facilities or included as an update to the South Ellwood Facilities Fire Prevention and Preparedness Plan. The Plan shall be submitted to the City of Goleta and the Santa Barbara County Fire Department (SBCFD) for review and approval prior to the issuance of the City's Land Use Permit.	At PRC 421	Venoco shall ensure that a Fire Prevention Plan is created for PRC 421.	A Fire Prevention Plan would detail fire prevention strategies for the project.	SBCFD, City of Goleta	Prior to City's Land Use Permit issuance

Table 7-10. Mitigation Monitoring Program—Transportation and Circulation

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact TR-1: Construction-Generated Traffic Traffic generated from construction activities would have a short-term, less than significant impact on local transportation and circulation (Less than Significant with Mitigation).	**MM TR-1a. Route Construction Traffic to Avoid Congested Intersection**s. To minimize the potential for adverse impacts, Venoco shall direct Project construction traffic, particularly heavy trucks, during non-emergency trips, to avoid congested areas at Storke Road and use the Winchester Canyon Overpass to access the Project site. Venoco shall prepare and implement a Construction Traffic Control Plan that would apply to all construction activities, including but not limited to recommissioning and decommissioning activities, for review and approval by the City of Goleta.	Winchester Canyon Overpass	The project contractor and monitor shall ensure that construction traffic accesses the project site and Highway 101 from the Winchester Canyon Overpass instead of Storke Rd.	Directing traffic away from Storke Rd will reduce traffic congestion.	City of Goleta	During Project construction

Table 7-10. Mitigation Monitoring Program—Transportation and Circulation

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	MM TR-1b. Repair/Upgrade Any Damage to Access Road. To minimize the potential for adverse impacts, Venoco shall repair/upgrade the access road if it receives damage or degradation as a result of construction-related traffic. The access road shall be inspected and photographed before and after the Project, and a determination will be made regarding any needed repairs.	Access road	The project contractor and monitor shall ensure that repairs to damage from construction related activities are preformed on the access road.	Impacts from short-term construction are less than significant on local transportation, circulation, and roadways.	City of Goleta	During and after Project construction

Table 7-11. Mitigation Monitoring Program—Noise

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact NZ-1: Construction Impacts to Beach Users and Golfers Short-term noise levels would increase during Project construction potentially affecting a public beach and the Sandpiper Golf Course (Less than Significant).	**MM NZ-1a. Sound-Control Devices**. All construction equipment shall have properly maintained sound-control devices, and no equipment should have an unmuffled exhaust system.	At PRC 421	The project contractor shall ensure that all construction equipment has properly maintained sound control devices and that no equipment has an unmuffled exhaust system. The project monitor will review and confirm implementation of required measures.	Ensuring the use of sound control devices will reduce noise generated from construction equipment.	City of Goleta	During Project construction
	MM NZ-1b. Additional Best Management Practices (BMPs). Contractors shall implement	At PRC 421	The project contractor should ensure that all	Implementing noise mitigation measures will	City of Goleta	During Project construction

Table 7-11. Mitigation Monitoring Program—Noise

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	appropriate BMPs to avoid impacting the public including but not limited to changing the location of stationary construction equipment, shutting off idling equipment, and installing acoustic barriers around significant sources of stationary construction noise, so that the noise at sensitive receptors such as golf courses, water recreation areas, and riding stables does not exceed 70 A-weighted decibels (dBA) California Noise Equivalent Level (CNEL).		appropriate noise mitigation measures are implemented, as detailed. The project monitor should review and confirm implementation of measures.	reduce noise generated from the project.		
	MM NZ-1c. Buffers. To the maximum extent feasible, adequate distance buffers shall be maintained between noise-generating machinery or equipment and any sensitive receptors. The buffer shall be of a width that will ensure that noise at the receiver site such as a residence does not exceed 65 A-weighted decibels (dBA) California Noise Equivalent Level (CNEL), and at receptors such as golf courses, water recreation areas, and riding stables, the noise does not exceed 70 dBA CNEL. For equipment that produces a noise level of 95 dBA at 50 feet, a buffer of 1,600 feet is required for attenuation of sound levels to 65 dBA.	At PRC 421	The project contractor and project monitor should ensure that noise buffers are maintained, as detailed, in coordination with the City of Goleta.	Noise buffers will reduce noise generated from the project for sensitive receivers.	City of Goleta	During Project construction

Table 7-12. Mitigation Monitoring Program—Aesthetics/Visual Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact VR-1: Visual Effects from Construction Activities at PRC 421 Construction activities would create negative visual impacts (Less than Significant with Mitigation).	**MM VR-1a. Use Laydown Areas for Overnight Storage of Equipment**. Equipment placed on the beach shall be returned to the laydown areas at the end of each workday, both for public safety and for aesthetic considerations.	At the beach at PRC 421	The project contractor and monitor shall ensure that all construction equipment placed on the beach is returned to the laydown areas at the end of each work day.	Removing equipment from the beach will eliminate visual impacts on the weekends and at night.	CSLC and City of Goleta	Each night during Project construction
	MM VR-1b. Caution Tape around Materials Placed on Beach. Materials temporarily placed on the upper reaches of the beach shall be roped-off with caution tape and removed within 24 hours in most cases.	At the beach at PRC 421	The project contractor and monitor shall ensure that materials placed on the beach temporarily are roped off with caution tape and removed as detailed.	Removal of items placed temporarily on the beach after 24 hours will reduce visual impacts.	CSLC and City of Goleta	During Project construction
	MM VR-1c. Material Removal at Construction Completion. All materials, equipment, and debris shall be removed from the site upon completion of the Project construction. Venoco shall revegetate all areas subject to ground disturbance associated with project construction with species that are biologically and visually compatible with the surroundings in accordance with a Restoration Plan approved by the City of Goleta as identified in MM TBIO-1c Restoration Plan/Restoration.	At PRC 421	Venoco shall ensure that all construction materials will be removed from the Project site after completion and appropriately revegetate disturbed areas.	Removal of construction materials and revegetation will help minimize visual impacts	CSLC and City of Goleta	At construction completion
	MM VR-1d. Minimal Night Lighting. Lighting shall use the minimum number	At PRC 421	Venoco shall ensure that use	Minimal use of night lighting will	CSLC and City of Goleta	During construction

Table 7-12. Mitigation Monitoring Program—Aesthetics/Visual Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	of fixtures and intensity needed for construction activities. Fixtures shall be fully shielded and have full cut-off lights to minimize visibility from public viewing areas, wildlife habitats, migration routes, and other sensitive environs. Venoco shall prepare and implement a Night Lighting Plan to ensure that night lighting is minimal and directed away from sensitive habitats to the maximum extent feasible, for review and approval by the City of Goleta.		of night lighting will be minimized	help reduce visual impacts to receptors		
	MM VR-1e. No Night Lighting After 5:00 p.m. Night lighting and work shall not occur past the 5:00 p.m. work stoppage deadline.	At PRC 421	Venoco shall ensure that construction activities cease by 5 p.m. and that no night lighting is used is used thereafter.	Adherence to the 5 p.m. stoppage deadline will reduce the need for night lighting and reduce visual impacts.	CSLC and City of Goleta	During construction
Impact VR-2: Visual Effects from Accidental Oil Spills Project implementation would incrementally increase the likelihood of oil spill from primary or secondary Project components, including Pier 421-2, associated pipelines, and the Line 96 pipeline (Significant and Unavoidable).	Implementation of those MMs identified in Sections 4.2, Safety; 4.3, Hazardous Materials; 4.5 Hydrology, Water Resources, and Water Quality, 4.6, Marine Biological Resources; and 4.7 Terrestrial Biological Resources for contingency planning and spill response shall be required.	See specific MMs in MMP for details on Location, Monitoring/ Reporting Action, Effectiveness Criteria, Responsible Agency, and Timing				

Table 7-13. Mitigation Monitoring Program— Cultural, Historical, and Paleontological Resources

Impact (Class)	Mitigation Measure (MMs)	Location	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Impact CR-1: Potential Impacts to Previously Undiscovered Cultural Resources During Construction Although no cultural resources are known to be present within the Project area and Project activities would generally occur in previously disturbed areas, excavations around the EOF and along the Project access road could exceed previous depths and disturb previously undiscovered cultural resources (Less than Significant with Mitigation).	**MM CR-1. Cultural Resources Monitor.** A qualified cultural resources expert shall act as a construction monitor during all ground-disturbing work. The expert shall be retained by the City of Goleta and paid for by Venoco. The Cultural Resources Monitor shall prepare a Cultural Resources Monitoring Plan, outlining the approach to monitoring, involvement of the affected Native American nation, and detailing pre-construction workshops for construction personnel for review approval by the City of Goleta and paid for by Venoco. In the event archaeological resources are encountered during grading, as observed by the cultural resources monitor or their designee, work shall be stopped immediately or redirected until the City-approved archaeologist and local Chumash observer can evaluate the significance of the find pursuant to Phase 2 investigation standards set forth in the City Archaeological Guidelines. The Phase 2 shall be funded by Venoco. If resources are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with City Archaeological Guidelines. The Phase 3 shall be funded by the permittee. This requirement shall be printed on all plans submitted for any City of Goleta Land Use Permit, building, grading, or demolition permits.	At PRC 421, EOF	Monitors shall prepare memoranda for review by City describing any discovered resources and the course of action taken. If a Phase II investigation is necessary, Venoco shall consult with the City to identify and retain a cultural resources expert to prepare the investigation.	Expert monitor will ensure that any previously undiscovered resources are protected.	City of Goleta	During construction

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