4. Revised Pages to the Draft EIR

In accordance with Section 15132 of the CEQA *Guidelines*, this Section presents the changes that were made to the Draft EIR to clarify or amplify its text in response to comments. Such changes are insignificant as the term is used in Section 15088.5(b) of the CEQA *Guidelines* in that no new potentially significant impacts are identified, and the effectiveness of identified mitigation is not reduced. Deletions to text are shown by strike-through and additions to text are shown by underline.

Executive Summary

Refer to the changes to the Executive Summary Table ES-1 included on page 4-11 of this section.

1.0 Introduction

PAGE **CORRECTION:**

1-7 The Department of the Army, U.S. Corps of Engineers (Corps), San Francisco Bay Conservation and Development Commission (BCDC), and the San Francisco Bay Regional Water Quality Control Board (SF-RWQCB), and the U.S. Environmental Protection Agency (EPA) all have responsibility for review of proposals for maintenance dredging and disposal. In addition, the Dredged Material Management Office (DMMO) has responsibility for areas requiring new dredging.

1-8

The city of Richmond has jurisdiction over any potential for local entitlements (i.e., encroachment permits, design review, and/or use permits). The city of Richmond may also be a "responsible agency" under the CEQA. In that capacity the city is responsible for review of a Chevron-submitted Stormwater Control Plan per SF-RWCQB's C-3 regulations.

3.4 Cumulative Projects

PAGE **CORRECTION:**

3-11 Chevron Energy and Hydrogen Renewal Project

The proposed Chevron Energy and Hydrogen Renewal Project involves four main components: Hydrogen Plant Replacement, Reformer Replacement, Power Plant Replacement, and Hydrogen Purity Improvements. The Renewal Project would replace and alter facilities within existing manufacturing areas of the Refinery. Other smaller projects to update plant equipment are also under consideration. These other projects could involve the addition and/or replacement of approximately six

storage tanks, additional truck traffic through the Marketing terminal, and a post-construction cumulative impacts analysis - as ordered by the court - of an already-completed project to build two new LPG spheres. Chevron proposes the Renewal Project to increase energy efficiency, to improve equipment and process reliability, and to reduce air emissions. The Renewal Project would improve the Refinery's ability to process crude oil and other feed stocks from around the world and to direct more of current gasoline production capacity to the California market. The proposed project would require a Conditional Use Permit from the City of Richmond and Design Review. The project will also require a Bay Area Air Quality Management District (BAAQMD) Authority to Construct and Permit to Operate (ATC/PTO). (Source: CEQAnet web site of the Office of Planning and Research.) The NOP for the proposed project has been issued, but the DEIR is not yet completed or public.

4.1 Operational Safety/Risk of Accidents

PAGE **CORRECTION:**

4.1-36 *Preventative Maintenance*

MOTEMS has established requirements for preventative maintenance that include periodic inspection of all components related to transfer operations. Chevron is required to comply with those requirements.

3.1-36 ~~**OS-3a.** Provide quick release devices that would allow a vessel to eave the wharf as quickly as possible in the event of an emergency (fire, accident, or tsunami that could lead to a spill) that could impact the wharf or the vessel.~~

4.1-37

~~**OS-3d.** Develop a comprehensive preventative maintenance program that includes periodic inspection of all components related to transfer operations. The program shall be subject to California State Lands Commission review and approval.~~

4.1-37 Rationale for Mitigation: ~~The wharf currently has no mechanisms that would allow the quick release of mooring lines in the event of an emergency. In the event of a fire, oil spill, earthquake, or tsunami, quick release of the mooring lines would allow the vessel to quickly leave the wharf, which could help prevent damage to the wharf and vessel. The quick release hooks have options for mooring line release including electrically at the hook with a push button and/or all lines can be released from the control room.~~

4.1-37

Residual Impacts: The above measures would lower the probability of an oil spill by allowing for monitoring of tension of the mooring lines (OS-3b), and allision avoidance to prevent damage to the pier and/or vessel during docking operations (OS-3c). These measures help to reduce the potential for spills and their associated impacts. However, the impacts associated with the consequences of larger spills, greater than 50 bbls, could remain significant (Class I).

4.1-39 ~~Mitigation Measures for OS-5:~~

OS-5. ~~Implement MM OS-3d.~~ MOTEMS has established requirements for preventative maintenance that include periodic inspection of all components related to transfer operations. Chevron is required to comply with those requirements. Mitigation is no longer required.

~~Rationale for Mitigation: The measure OS-3d would require a comprehensive preventative maintenance program with periodic inspections to help to lower the probability of oil spills and their associated impacts.~~

Residual Impacts: The impacts associated with the consequences of larger spills could remain significant (Class I).

4.1-42 No discussion or procedures for dealing with tank vessel fires or for conducting periodic fire drills could be found in Chevron's manuals addressing fires or emergency response. This has been identified as a deficiency in the manual and in planning for emergency response.. However, since MOTEMs became effective, February 6, 2006, Chevron is required to be consistent with the requirements of sections 3102F3.8 and 3108F2.2 of 24 CCR, Part 2, California Building Code, Chapter 31F for a MOT Fire Plan and its contents. However, until the Plan is submitted, the above deficiency exists.

Mitigation Measures for OS-6:

~~**OS-6a.** Chevron shall implement MM OS-3a to provide for quick release devices that would allow a vessel to depart the wharf quickly and help in the event of a fire.~~

OS-6b. Chevron shall develop a set of procedures and conduct training and drills for dealing with tank vessel fires and explosions for tankers berthed at the Long Wharf. The procedures should include the steps to follow in the event of a tank vessel fire and describe how Chevron and the vessel will coordinate activities. The procedures shall also identify other capabilities that can be procured if necessary in the event of a major

incident. The procedures shall be submitted to the U.S. Coast Guard and California State Lands Commission within 90 days of lease renewal. ~~The plan shall be consistent with the requirements of section 3108F2.2 of 24 CCR, Part 2, California Building Code, Chapter 31F.~~

4.1-42 Rationale for Mitigation: ~~MM OS-3a will provide for quick release of mooring lines to prevent damage to the wharf and vessel~~

For Impact OS-6b, Chevron's Operations Manual presently has no discussion or procedures for dealing with tank vessel fires or emergency response. Procedures, training, and drills need to be in place in planning for emergency response, so that the wharf operations crew follows appropriate steps to ensure that emergency response measures are implemented without incident in an emergency situation. While this is a MOTEMS requirement, MOTEMS implementation would not be required for several years, thus the deficiency would remain. The mitigation measure requires that a plan be prepared in 90 days to safeguard the Long Wharf and berthing vessels.

4.1-47 **OS-7b.** Chevron shall respond to any spill from a vessel traveling to or from the wharf, moored at its wharf, related in any way to the wharf, or carrying cargo owned by Chevron, as if it were its own, without assuming liability, until such time as the vessel's response organization can take over management of the response actions in a coordinated manner.

4.2 Water Quality

PAGE **CORRECTION:**

4.2-43 **WQ-2.** Following the adoption of the Mitigation Monitoring Program for the proposed Project, Chevron will advise both agents and representatives ~~representing vessels that have called at the Long Wharf as of the date of adoption of the cited Mitigation Monitoring Program, and Chevron will advise representatives~~ of shipping companies having control over vessels that have informed Chevron of plans ~~would be likely~~ to call at the Long Wharf ~~in the future~~ about the California Marine Invasive Species ~~Control~~ Act. Chevron will ensure that a Questionnaire containing the following questions is provided to the Vessel Operator, and inform the Vessel Operator that the Questionnaire should be completed on behalf of the vessel, by its Captain or authorized representative, and provided to the California State Lands Commission's Marine Facilities Division's Northern California Field and Sacramento Offices, either electronically or by facsimile, prior to the vessel's entry into San Francisco Bay or in the alternative, at least 24 hours prior to the vessel's arrival at the Long Wharf.

4.2-43 **WQ-7.** Following the adoption of the Mitigation Monitoring Program for the proposed Project, Chevron will advise both agents and representatives of shipping companies having control over or representing vessels that have informed Chevron of plans to call at the Long Wharf ~~as of the date of adoption of the cited Mitigation Monitoring Program, and vessel representatives that would be likely to call at the Long Wharf in the future~~ about the requirements of the 2008 International Maritime Organization (IMO) prohibition of TBT applications to vessel hulls. Following the effective date of the IMO prohibition, Chevron will ensure that the Master (Captain) or authorized representative of vessels intending to call at the Long Wharf certify that their vessel is in compliance and provide a copy of such certification to the California State Lands Commission's Marine Facilities Division's Northern California Field and Sacramento Offices, either electronically or by facsimile, prior to the vessel's entry into San Francisco Bay or in the alternative, at least 24 hours prior to the vessel's arrival at the Long Wharf.

4.2-43 **WQ-9.** Chevron shall coordinate with the Regional Water Quality Control Board to develop a Stormwater Pollution Prevention Plan within 12 months of lease implementation, that Chevron shall prepare specifically for the Long Wharf ~~implement BMPs~~ to reduce the input of chemicals to the Bay from the marine terminal. BMPs for consideration shall include, ~~including~~ (at a minimum) (1) conducting all vehicle maintenance on land not over water or marshland, (2) berming all areas on the pier where maintenance activities are being conducted and cleaning up all spilled contaminants before berms are removed, (3) when necessary, washing the surface of the pier to the extent practical and directing washwater into sumps, (4) maintenance of sumps, and (5) posting signs to educate all workers to the importance of keeping contaminants from entering the Bay. These and other BMPs shall be detailed in a Stormwater Pollution Prevention Plan that Chevron shall prepare specifically for the Long Wharf.

4.2-50 **WQ-11.** MM OS-3b~~a~~ and ~~through~~MM OS-3c~~d~~ (Operational Safety/Risk of Upset) and MM OS-4 shall be implemented.

4.3 Biological Resources

PAGE **CORRECTION:**

4.3-138 **BIO-6a.** Implement MM OS-3b,~~a through~~ MM OS-3c,~~d~~ and MM OS-4 in Operational Safety/Risk of Accidents to either lower the probability of an oil spill or increase response capability.

4.3-138 **BIO-6c.** Have procedures in place to flush double-crested cormorants from the waters contaminated by oil with capability ~~Arrangements should be made~~ to quickly bring expert bird rehabilitators to

the site to rescue oiled birds. Provide the CSLC with copies of proof of existing arrangements with specialized wildlife handlers.

4.3-139 **BIO-6f.** Chevron shall work with the Natural Resource Damage Assessment (NRDA) team, as the team may request, to determine the extent of damage and loss of resources, cleanup, restoration and compensation. Chevron shall keep the CSLC informed of their participation in such efforts, by providing copies of memos, meeting agendas, or other appropriate documentation, including e-mails. ~~If damage occurs, the last resort is restoration and compensation. Any loss of resources shall be documented as soon as possible after a large spill. The sampling methods and design should be determined beforehand, and the plan should include provisions for getting resources onsite as soon as possible so that post-spill studies can begin immediately.~~

4.3-139 MM BIO-6f requires Chevron to cooperate with the NRDA to aid in the effectiveness of determining damage from oil spills, best methods of cleanup, restoration and compensation for damages. ~~MM BIO-6f requires the immediate documentation of any damage from oil spills, which is critical to the determination of compensation; and insures that sampling methods and design are planned as soon as a spill occurs so that further damage will not occur and so that post spill studies can commence; and provides a means to determine the effectiveness of documentation.~~

4.4 Commercial and Sport Fisheries

PAGE **CORRECTION:**

4.4-35 OS-6 includes a provision for dealing with tank vessel fires and explosions for tankers berthed at the Long Wharf. OS-7a requires Chevron to participate in any….

4.5 Land Use and Recreation

PAGE **CORRECTION:**

4.5-4 In the immediate area of the Refinery, ~~a bike/pedestrian trail accesses I-580 between Marine Avenue and Western Drive~~the current bicycle pathway linking Point Richmond and Point Molate is not very well marked as it traverses the narrow and steep streets of Point Richmond. It also occupies the I-580 shoulder in several places, thereby severely limiting its usage and raising safety issues. While there is no designated trail north to Castro Point, Western Drive is used by some bicyclists. Between these two access ramps, the bikeway is designated by a white solid stripped line on the far right side of each side of the interstate. The trail continues north

along Western Drive to about Castro Point, and south through the city of Richmond.

4.11 Geological Resources Structural Integrity Review

PAGE **CORRECTION:**

4.11-18 **GEO-4.** As soon as possible, after notification of a tsunami, Long Wharf operators shall release the vessel from its mooring and the vessel shall move away from the Long Wharf, when the Captain determines that it is safe and feasible to do so.

Rationale for Mitigation: Even with structural upgrades, the Long Wharf still has the potential to be damaged if a vessel is moored during a tsunami event. If a vessel does not have time to move to deeper water, a plan must be in place and be implemented, to attempt to protect both the vessel and the Long Wharf, to the greatest extent feasible, while still regarding the safety of vessel, crew, and terminal workers.

4.11-19 and 4.11-20

Impact GEO-6: Future Consideration of Larger Vessels at Berth No. 4

A preliminary analysis indicates that the structural capacity of the breasting dolphins and the main Long Wharf would need to be increased, in order to berth/moor larger vessels at Berth No. 4. Compliance with MOTEMS will assure that ~~Significant, adverse impacts could occur without~~ proper design and construction of seismic and mooring improvements are addressed for larger vessels at Berth No. 4.

Over the 30-year proposed lease period, larger vessels may possibly be moored at Berth No. 4. Currently, the BCDC allows mooring of vessels with 150,000 tons of cargo at the Long Wharf. Berth No. 4 currently handles the largest ships, including VLCC's up to 272,000 DWT. A preliminary mooring analysis to accommodate double-hull ships up to 292,000 DWT indicates that modifications would be required for the breasting dolphins, the main Long Wharf structure, the loading arms, and also some dredging would have to be done to facilitate a wider vessel. In addition, a seismic reassessment would be required along with these structural modifications. Chevron is required to comply with MOTEMS berthing and mooring criteria. As required by MOTEMS, a mooring analysis will determine if the existing mooring system on the Chevron Terminal wharf is in compliance and identify any needed improvements. ~~Significant, adverse impacts (Class II) could occur without proper design and construction of these improvements required for the mooring of larger vessels at Berth No. 4.~~

~~Mitigation Measures for GEO-6:~~

~~**GEO-6** Additional mooring and structural analyses will be required and results implemented prior to the berthing of larger double-hulled vessels at Berth No. 4.~~

GEO-6: Mitigation is no longer required.

~~Rationale for Mitigation: A preliminary mooring analysis indicates that mooring of larger double-hull vessels at Berth No. 4 will require dredging a wider berth, raising the height of the loading arms, and upgrading the breasting dolphins and main Long Wharf. The structural capacity of the breasting dolphins and the main Long Wharf would need to be increased to withstand increased design winds from the south and southwest that would be pushing against the larger vessels. Seismic considerations would also have to be included in final design of any modifications. Alternatively, a reduction in the operating wind-envelope within which these vessels could moor at Berth No. 4 should be considered. Implementation of these modifications would reduce impacts to a less than significant level.~~

4.12 Socioeconomics

PAGE	CORRECTION:
4.12-7	Impacts from oil releases could degrade the environment and preclude the use of shoreline land and associated recreational activities. Potential socioeconomic implications would include any area, structure, or facility that could experience business interruption and loss of revenue as a result of a spill and resultant cleanup operations. Monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act would be applied to mitigate the loss of revenue. Since this requirement is established, impacts would be adverse, but less than significant (Class III). ~~Impacts could be Class I or II, depending on severity of impact.~~
4-12-8	Thus, any spill event that would result in loss of business revenue would be considered to be significant. ~~(Class I or II) impact~~ Monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act would be applied to mitigate the loss of revenue. Since this requirement is already established, impacts are adverse, but less than significant (Class III). ~~Even with mitigation, in the form of monetary compensation for losses, some impacts would be expected to remain significant.~~

~~Mitigation Measures for SOC-1:~~

~~**SOC-1.** Mitigation would be in the form of monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act.~~

SOC 1: No mitigation is required.

~~Rationale for Mitigation: The provision of monetary compensation could help to recover monetary losses from business interruptions resulting directly or indirectly from oil spill events. Such compensation would serve to help businesses stay away from bankruptcy, by providing help through a time period where public access may be either directly or indirectly restricted, or during a period where no or little business would occur due to little public interest in visiting an area or using a business during cleanup operations.~~

~~Residual Impact: Even with mitigation, in the form of monetary compensation for losses, some impacts could be expected to remain significant.~~

4.13 Environmental Justice

PAGE **CORRECTION:**

4.13-9 **EJ-1.** Should an oil spill from the Long Wharf extend beyond 0.5 mile from the Terminal and preclude ~~sport fishing~~ subsistence fishing by members of minority and/or low income communities for more than two days, Chevron U.S.A., Inc. shall contribute either funds or food stuffs to a local food bank in an amount sufficient, as determined in conjunction with the CSLC, to replace food sources that would have been supplied within the affected areas.

Mitigation Monitoring

PAGE **CORRECTION:**

Table 6-1 The Mitigation Monitoring Program from Section 6.0 of the Draft EIR on pages 6-4 through 6-27 is modified to reflect changes and clarifications as noted elsewhere in the Finalizing Addendum. The changes to Section 6.0 begin on page 4-33.

Table ES-1
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.1 OPERATION SAFETY/RISK OF UPSET			
OS-1	There are no deficiencies with the existing deck drainage system or procedures that could pose a risk for, or increase the potential for spills at the terminal from routine operations. However, small spills are still possible but are adverse, and less than significant.	III	None required.
OS-2	Potential impacts to public safety from a highly-volatile product release are adverse, but less than significant since the vapors evaporate quickly.	III	None required.
OS-3	Chevron's response capability for containment of spills during transfer operations would result in adverse and significant impacts for spills greater than 50 bbls. Consequences would range from spills that can be contained during first response efforts with rapid cleanup (Class II), to those complex spills that result in a significant impact (Class I) with residual effects after mitigation.	I or II	~~**OS-3a**: Provide quick release devices that would allow a vessel to leave the wharf as quickly as possible in the event of an emergency (fire, accident or tsunami that could lead to a spill), which could impact the wharf or the vessel.~~ **OS-3b**: Install tension-monitoring devices at Berth 1 to monitor mooring lines and avoid excessive tension or slack conditions that could result in spills. An alarm system (visual and sound) that incorporates communication to the control-building operator shall also be a part of the system. In addition, if any vessel drifts (surge or sway) more than 7 feet from its normal manifold or loading arm position at any other terminal berth, Chevron shall install, within 6 months after the incident, tension-monitoring devices at such berth. **OS-3c**: Install Allision Avoidance System (AAS) at the terminal to prevent damage to the pier and/or vessel during docking operations. Prior to implementing this measure, Chevron shall consult with the San Francisco Bar Pilots, the U.S Coast Guard, and the staff of the CSLC and provide information that would allow the CSLC to determine, on the basis of such consultations and information regarding the nature, extent and adequacy of the existing berthing system, the most appropriate application and timing of an AAS at the Chevron Long Wharf.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			~~**OS-3d**: Develop a comprehensive preventative maintenance program that includes periodic inspection of all components related to transfer operations. The program shall be subject to California State Lands Commission review and approval.~~
OS-4	Group V oils have a specific gravity greater than 1 and do not float on the water; instead, they will sink below the surface into the water column or possibly to the bottom. Chevron states in their Spill Preparedness and Emergency Response Plan that no reasonable technology currently exists for a Group V response in the San Francisco Bay.	I	**OS 4:** Chevron shall confer with the California State Lands Commission (CSLC) regarding Group V oil spill response technology, including potential new response equipment and techniques that may be applicable for use at the Long Wharf. Chevron shall work with the CSLC in applying these new technologies, as agreed upon, if recommended for this facility**.**
OS-5	Spills from the terminal during non-transfer periods would be associated with pipelines and are considered a significant (Class II) impact if spills are less than 50 bbls, or significant (Class I) impacts for spills greater than 50 bbls.	I or II	**OS-5**: ~~Implement MM OS-3d.~~ MOTEMS has established requirements for preventative maintenance that include periodic inspection of all components related to transfer operations. Chevron is required to comply with those requirements. Mitigation is no longer required.
OS-6	Public areas are beyond the hazard footprint boundary; thus fires and explosions would not cause a public safety risk. However, the Wharf's Operations Manual does not address fire emergency procedures and a fire and/or explosion could lead to a release of oil. Since MOTEMS became effective, February 6, 2006, Chevron is required to be consistent with the requirements of sections 3102F3.8 and 3108F2.2 of 24 CCR, Part 2, California Building Code, Chapter 31F for a MOT Fire Plan.	II	~~**OS-6a:** Chevron shall implement MM OS-3a to provide for quick release devices that would allow a vessel to depart the wharf quickly and help in the event of a fire.~~ **OS-6b**: Chevron shall develop a set of procedures and conduct training and drills for dealing with tank vessel fires and explosions for tankers berthed at the Long Wharf. The procedures should include the steps to follow in the event of a tank vessel fire and describe how Chevron and the vessel will coordinate activities. The procedures shall also identify other capabilities that can be procured if necessary in the event of a major incident. The procedures shall be submitted to the U.S. Coast Guard and California State Lands Commission (CSLC) within 90 days of lease renewal. The CSLC shall have final approval of the plan. ~~The plan shall be consistent with the requirements of section 3108F2.2 of 24 CCR, Part 2, California Building Code, Chapter 31F.~~

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
OS-7	Spills from accidents in the Bay could result in impacts to water quality or biological resources that could be significant adverse (Class II) impacts for those that can be contained during first response efforts; or significant adverse (Class I) impacts that would have residual impacts. While Chevron does not have legal responsibility for tankers it does not own, it does have responsibility to participate in improving general response capabilities.	I or II	**OS-7a:** Chevron shall participate in an analysis to determine the adequacy of the existing VTS in the Bay Area, if such a study is conducted by a federal, state, or local agency during the life of the lease. Agencies such as the San Francisco Bay Harbor Safety Committee often conduct studies of safety issues within the Bay Area. As vessel traffic increases in and around the Bay Area and as technology improves, it may be necessary and feasible to upgrade and expand the VTS in and around the Bay Area. Chevron shall participate in this analysis and contribute a pro-rata share toward the upgrade and expansion of the system, if required to do so by the CSLC. **OS-7b:** Chevron shall respond to any spill from a vessel traveling to or from the wharf, moored at its wharf, related in any way to the wharf, or carrying cargo owned by Chevron, as if it were its own, without assuming liability, until such time as the vessel's response organization can take over management of the response actions in a coordinated manner.
Section 4.2 WATER QUALITY			
WQ-1	Disturbed sediments could cause a brief, localized increase in turbidity and depression in dissolved oxygen concentrations, but would disperse rapidly with the strong tidal currents in the area, and be rapidly mitigated by tidal mixing with Bay waters of high dissolved oxygen concentration. Such events would occur for an hour or less during a 24-hour period and be limited to the immediate vicinity of the Long Wharf.	III	None required.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
WQ-2	Discharge of ballast water that contains harmful microorganisms could impair several of the project area's beneficial uses, including commercial and sport fishing, estuarine habitat, fish migration, preservation of rare and endangered species, water contact recreation, non-contact water recreation, fish spawning, and wildlife habitat. Therefore discharge of segregated ballast water is determined to have a potentially significant impact to water quality.	I	**WQ-2:** Following the adoption of the Mitigation Monitoring Program for the proposed Project, Chevron will advise both agents ~~representing vessels that have called at the Long Wharf as of the date of adoption of the cited Mitigation Monitoring Program, and Chevron will advise~~ representatives of shipping companies having control over or representing vessels that have informed Chevron of plans to ~~would be likely to~~ call at the Long Wharf about the California Marine Invasive Species ~~Control~~Act. Chevron will ensure that a Questionnaire containing the following questions is provided to the Vessel Operator, and inform the Vessel Operator that the Questionnaire should be completed on behalf of the vessel, by its Captain or authorized representative, and provided to the California State Lands Commission's Marine Facilities Division's Northern California Field and Sacramento Offices, either electronically or by facsimile, prior to the vessel's entry into San Francisco Bay or in the alternative, at least 24 hours prior to the vessel's arrival at the Long Wharf. The Questionnaire shall solicit the following information: 1. Does the vessel intend to discharge ballast water in San Francisco Bay, the Carquinez Strait or any other location(s) in a Bay waterway on its transit to the Chevron Richmond Long Wharf? 2. Does the vessel intend to discharge ballast water at the Chevron Richmond Long Wharf? 3. Which of the following means specified in the California Marine Invasive Species Act (MISA) or Title 2, Division 3, Chapter 1, Article 4.6. has the vessel operator used or intend to use on the current voyage to manage the vessel's ballast water: a mid-ocean exchange (as defined in Section 71200(g)); a near-coastal exchange (as defined in Section 71201(b)); retain all ballast on board; or discharge the ballast water at the same location (as defined in Section 71204.2(c)(2)) where ballast originated, provided ballast water was not mixed with ballast water taken on in an area other than mid-ocean waters?

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
WQ-3	Vessel wastes are treated and discharged in accordance with an NPDES permit and because the discharge is monitored and Chevron generally has been within permit requirements for the last five years, the impacts of chemical contaminants in treated terminal wastes on water quality are considered to be adverse but less than significant.	III	None required.
WQ-4	Firewater has been treated at the Refinery and because contaminants in firewater would be diluted below thresholds within a matter of minutes, the impacts of firewater discharge on marine water quality are considered to be adverse but less than significant.	III	None required.
WQ-5	Non-segregated ballast water that is sent to the treatment facility may include nonindigenous organisms. Treatment at the facility does not include any specific procedures to prevent organisms that may be in ballast water from being discharged to Bay waters. Discharge of harmful microorganisms would be a significant adverse impact.	II	**WQ-5**: Chevron shall not discharge any non-segregated ballast water received at the Long Wharf to San Francisco Bay. If Chevron needs to unload unsegregated ballast water, it shall be unloaded into a tanker truck or other suitable wastehandling vehicle and disposed of at an appropriate facility.
WQ-6	The slow leaching of zinc anodes may increase metal concentrations, but due to the slow rate of exchange of the anodes to seawater, the impact of cathodic protection on water quality is adverse, but less than significant.	III	None required.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
WQ-7	Marine anti-fouling paints are highly toxic containing copper, sodium, zinc, and tributyltin (TBT) and their use on vessels associated with the Long Wharf is considered to be a significant adverse impact to water quality that cannot be mitigated to less than significant.	I	**WQ-7:** Following the adoption of the Mitigation Monitoring Program for the proposed Project, Chevron will advise both agents and representatives of shipping companies having control over or representing vessels that have informed Chevron of plans to ~~called at the Long Wharf as of the date of adoption of the cited Mitigation Monitoring Program, and vessel representatives that would be likely to~~ call at the Long Wharf ~~in the future~~ about the requirements of the 2008 International Maritime Organization (IMO) prohibition of TBT applications to vessel hulls. Following the effective date of the IMO prohibition, Chevron will ensure that the Master (Captain) or authorized representative of vessels intending to call at the Long Wharf certify that their vessel is in compliance and provide a copy of such certification to the California State Lands Commission's Marine Facilities Division's Northern California Field and Sacramento Offices, either electronically or by facsimile, prior to the vessel's entry into San Francisco Bay or in the alternative, at least 24 hours prior to the vessel's arrival at the Long Wharf. .
WQ-8	Routine vessel maintenance would have the potential to degrade water quality due to chronic spills during transfers of lubricating oils, resulting in adverse significant impacts.	I or II	**WQ-8:** MM WQ-9 applies, which addresses Best Management Practices (BMPs) in a SWPPP for the Long Wharf.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
WQ-9	Stormwater runoff from the Long Wharf may contribute pollutants to the Bay in concentrations that may adversely affect some benthic species within the local area, resulting in a significant adverse impact to water quality.	II	**WQ-9:** Chevron shall coordinate with the Regional Water Quality Control Board to develop a Stormwater Pollution Prevention Plan that Chevron shall prepare specifically for the Long Wharf ~~Implement BMPs~~ to reduce the input of chemicals to the Bay from the marine terminal. BMPs for consideration shall include (at a minimum) (1) conducting all vehicle maintenance on land not over water or marshland, (2) berming all areas on the pier where maintenance activities are being conducted and cleaning up all spilled contaminants before berms are removed, (3) when necessary, washing the surface of the pier to the extent practical and directing washwater into sumps, (4) maintenance of sumps, and (5) posting signs to educate all workers to the importance of keeping contaminants from entering the Bay. These and other BMPs shall be detailed in a Stormwater Pollution Prevention Plan that Chevron shall prepare specifically for the Long Wharf.
WQ-10	The effects of dredging and dredged material disposal on water quality are regulated and subject to acquisition of a dredging permit prior to dredging, thus impacts on water quality are adverse, but less than significant.	III	None required.
WQ-11	Small leaks or spills (less than 50 bbl) related to Long Wharf operations could result in significant (Class II) impacts, while large spills (greater than 50 bbl) could result in significant adverse impacts (Class I).	I or II	**WQ-11:** MM OS-3b~~a~~ and ~~through~~ MM OS-3c~~d~~ (Operational Safety/Risk of Upset) and MM OS-4 shall be implemented.
WQ-12	A significant impact to water quality (Class I or II) could result from leaks or an accidental spill of crude oil or oil product from a vessel spill along tanker routes either in San Francisco Bay or outer coast waters.	I or II	**WQ-12:** The Long Wharf shall implement MM OS-7a and OS-7b of Section 4.1, Operational Safety/Risk of Upset Section, addressing potential participation in VTS upgrade evaluations, and Chevron response actions for spills at or near the Long Wharf.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.3 BIOLOGICAL RESOURCES			
BIO-1	Ship traffic associated with Long Wharf terminal operations represents an incremental amount compared to the background noise of ship traffic in San Francisco Bay and along outer coast tanker routes, thus disturbance to fishes from routine operations at the terminal are adverse, but less than significant impacts. Birds local to the terminal have adapted to vessel traffic, and impacts are adverse, but less than significant.	III	None required.
BIO-2	The area near the Chevron Long Wharf berth where propeller wash and bow thrusters may disturb sediments is very small compared to the amount of benthic habitat in the project area, and impacts of tanker sediment turbulence on benthic communities are adverse, but less than significant.	III	None required.
BIO-3	Loss of juvenile Dungeness crabs and young Chinook salmon would be significant if dredging occurs when juveniles are migrating through the area (Class II). Adverse, but Less than significant impacts (Class III) occur to plankton, other benthos, other fishes, and birds.	II	**BIO-3a:** The Long Wharf shall schedule dredging to avoid the months of May and June, when juvenile Dungeness crabs are most abundant in the Project area. In the event that, due to circumstances beyond lessee's control, dredging must occur in May and June to maintain a depth for safe navigation and operation of the terminal, lessee shall consult with the California Department of Fish and Game (CDFG) regarding the potential effects of such dredging on juvenile Dungeness Crabs and Chinook salmon smolts. Such consultation may occur directly with CDFG personnel in Region 3 or with CDFG personnel during the consideration of lessee's application to the Dredged Material Management Office (DMMO). If the CDFG concurs with dredging as proposed by the lessee, documentation of which shall be provided to Lessor, it shall be conclusively presumed that juvenile Dungeness Crabs and Chinook salmon smolts will not be significantly affected, and dredging may proceed as provided herein.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			BIO-3b: To avoid impacts to Pacific herring reproduction, the Long Wharf shall schedule dredging to avoid the herring spawning season of December through February and into March. **BIO-3c:** Although chances of entrainment of salmon are relatively low, to protect the salmon, the Long Wharf shall schedule dredging in June through November when winter and spring run Chinook salmon smolt activity is lowest.
BIO-4	Invasive organisms/introduction of non-indigenous species in ballast water released in the Bay could have significant impacts to plankton, benthos, fishes, and birds.	I	**BIO-4**: Implement MM WQ-2, in Water Quality, that requires that Chevron comply with the California Marine Invasive Species Control Act and related California State Lands Commission requirements, and the Ballast Water Management for Control of Non-Indigenous Species Act and fill out a questionnaire to enable the CSLC to better track the management of ballast water. Implement Mitigation Measure WQ-5 requiring segregated ballast water be unloaded to a suitable wastehandling vehicle and disposed of at an appropriate facility rather than being treated at the Chevron facility shall apply.
BIO-5	Contaminant inputs into the water from Chevron terminal operations are low when compared to other pollutant sources in the Bay. The impacts on plankton, benthos, fishes, and birds are less than significant.	III	None required**.**

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
BIO-6	A spill can significantly impact the biota at or near the Chevron terminal have the potential to spread through Carquinez Strait and into Suisun and San Pablo Bays. Vulnerable biota are plankton, benthos, eelgrass, fishes, marshes, birds, and mammals. Per Operational Safety/Risk of Accidents section, small spills at the terminal (less than 50 bbls) should be able to be contained (Class II impacts). However, spills larger than 50 bbls may not be able to be contained and Chevron Terminals may not have adequate boom to protect all the sensitive areas at the most risk that could be oiled within 3 hours of a spill from the terminal. Impacts from large spills are considered to be significant adverse (Class I) impacts.	I and II	**BIO-6a**: Implement MM OS-3b ~~a, through~~ MM OS-3c~~d~~, and MM OS-4 in Operational Safety/Risk of Accidents to either lower the probability of an oil spill or increase response capability. **BIO-6b:** Chevron shall demonstrate to the satisfaction of the California State Lands Commission (CSLC) that the Long Wharf can successfully implement its Oil Spill Response Plan and can deploy within 3 hours all the boom necessary to simultaneously protect all the sensitive resources at risk of contact with oil within 3 hours from a spill at the Long Wharf. Sensitive resources close to the Long Wharf include Castro Rocks, eelgrass beds, and the double-crested cormorant breeding colony on the Richmond-San Rafael Bridge. Procedures for the protection of Castro Rocks and eelgrass beds are detailed in the Area Contingency Plan (USCG and OSPR 1997). Chevron shall obtain the 15,000 feet (2.8 miles) of boom necessary to protect the Richmond eelgrass beds and Castro Rocks simultaneously from a spill at the Long Wharf. Chevron shall survey for eelgrass annually in the Richmond area and identify the places where substantial amounts of eelgrass currently grow. Chevron shall implement drills specifically designed to deploy and anchor booms simultaneously to protect immediately Castro Rocks and the Richmond eelgrass beds from oil. Because a spill could reach these areas rapidly, Chevron should have immediate access to the equipment and personnel detailed in the Area Contingency Plan. **BIO-6c:** Have procedures in place to flush double-crested cormorants from the waters contaminated by oil with capability~~Arrangements should be made~~ to quickly bring expert bird rehabilitators to the site to rescue oiled birds. Provide the CSLC with copies of proof of existing arrangements with specialized wildlife handlers and update every three years.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			BIO-6d: Chevron shall ensure that adequate equipment and personnel are available to protect the Castro Creek marshes, San Pablo Creek marshes, Pinole Pt. marshes and the southeastern San Pablo Bay mudflats within 8 hours of a spill at the Long Wharf. The strategy to protect each of these sensitive resources shall be tested with a field demonstration of deployment and placement of booms and other equipment in locations designated in the Area Contingency Plan to protect these sensitive habitats. **BIO-6e:** When a spill occurs, develop procedures for clean up of any sensitive biological areas contacted by oil, in consultation with biologists from California Department of Fish and Game and United States Fish and Wildlife Service, to avoid damage from clean up activities. **BIO-6f:** Chevron shall work with the Natural Resource Damage Assessment (NRDA) team, as the team may request, to determine the extent of damage and loss of resources, cleanup, restoration and compensation. Chevron shall keep the CSLC informed of their participation in such efforts, by providing copies of memos, meeting agendas, or other appropriate documentation, including e-mails. ~~If damage occurs, the last resort is restoration and compensation. Any loss of resources shall be documented as soon as possible after a large spill. The sampling methods and design should be determined beforehand, and the plan should include provisions for getting resources onsite as soon as possible so that post-spill studies can begin immediately.~~ **BIO-6g:** Chevron shall implement MM OS-7a and MM OS-7b in Operational Safety/Risk of Accidents addressing potential participation in VTS upgrade evaluations, and Chevron response actions for spills at or near the Long Wharf.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.4	**COMMERCIAL AND SPORTS FISHERIES**		
FSH-1	Space use conflicts between Long Wharf routine operations and commercial herring fishing could occur resulting in interference or displacement of herring fishing activities. Impacts would range from significant (Class II) to adverse, but less than significant (Class III), depending on herring spawning locations, fishing operations and other factors.	II to III	**FSH-1:** Chevron shall participate in the Pacific herring commercial fishery annual public scoping and hearing process, part of CDFG's annual review of herring commercial fishing regulations. Because CDFG has the authority to modify or develop regulations to address space use conflicts between the fishery and Chevron's operations, Chevron shall abide by any future regulations CDFG may develop to reduce space use impacts.
FSH-2	Space use conflicts between transiting vessels serving the Chevron Long Wharf and commercial herring operators could occur, resulting in interference or displacement of herring fishing activities.	II	**FSH-2**: Chevron shall notify herring operators during the herring fishing season of vessel transits, through the CDFG Director's Herring Advisory Committee or other means. Chevron shall also participate MM FSH-1, the Pacific herring commercial fishery annual public scoping and hearing process, part of CDFG's annual review of herring commercial fishing regulations.
FSH-3	Space use conflicts between sport fisheries in the Bay and normal Chevron Long Wharf operations are small.	III	None required.
FSH-4	Space use conflicts between Bay sport fisheries and vessels transiting to and from the Long Wharf are expected to be infrequent, and if they occur, are expected to be limited to a small portion of available fishing.	III	None required.
FSH-5	Vessel operators handling crude oil and product may affect commercial or recreational fishing; space use conflicts are expected to be adverse, but less than significant (Class III).	III	None required.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
FSH-6	Fisheries depend on a healthy environment to survive and flourish. Invasive species discharged from ballast water could impair water quality (Impacts WQ-2 and WQ-5) and biological resources (Impact BIO-4). These impacts to fisheries resources would impair commercial and sport fishing activities in the Bay and along the outer coast.	I	**FSH-6a:** Chevron shall: (1) carry out MM WQ-2 and MM WQ-5 for ballast water reporting, and distribute advisories about the California Marine Invasive Species Control Act and disposal of non-segregated ballast water. **FSH-6b:** Chevron shall participate and assist in funding ongoing and future actions related to invasive species and identified in the October 2005 Delta Smelt Action Plan (State of California 2005). The funding support shall be provided to the Pelagic Organism Decline Account or other account identified by the California Department of Water Resources and Department of Fish and Game, lead Action Plan agencies. The level of funding shall be determined through a cooperative effort between CSLC, and the Departments of Water Resources and Fish and Game and shall be based on criteria that establishes Chevron's commensurate share of the Plan's invasive species actions costs.
FSH-7	Chevron routine operations contribute to contamination of waters near the Long Wharf and to the Bay but impacts on sport and commercial fisheries are expected to be adverse, but less than significant (Class III).	III	None required.
FSH-8	Continuation of maintenance dredging at the Long Wharf is expected to cause Class III impacts on sport fishing activities and Class II impacts on herring spawning and fishing, Dungeness crab and salmon resources. New dredging to accommodate larger, double-hulled tankers is expected to cause impacts similar to those caused by routine operations at the Long Wharf (Class II and Class III).	II and III	**FSH-8:** Chevron shall comply with MM BIO-3 which calls for scheduling dredging during times of the year to avoid juvenile Dungeness crab, spring run Chinook salmon and herring spawning activity. In the event that dredging must occur in May and June (times to avoid for crab and salmon resources), MM BIO-3 requires consultation with CDFG and notification to CSLC.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
FSH-9	Shrimp, herring and sport fisheries in central and north San Francisco Bay, San Pablo Bay, Carquinez Strait and elsewhere in the estuary are at highest risk of spill contamination. Depending on spill location, size and water and weather conditions, areas upstream of the confluence of the Sacramento and San Joaquin rivers may also suffer harm. In addition marinas, launch ramps and fishing access points in the Bays may be threatened, contaminated or closed. Significant adverse impacts (Class I and II) to Bay commercial and sport fisheries would result from oil spill accidents originating at the Long Wharf or from tankers transiting the coast that service the wharf.	I or II	**FSH-9a:** Implement MM OS-3, MM OS-4, MM OS-6, and MM OS-7 in Operational Safety/ Risk of Accidents, and MM BIO-6b and BIO-6d in Biological Resources, to lower the probability of any oil spill and increase response capability. **FSH-9b:** Post notices at spill sites and marinas, launch ramps and fishing access points to warn fishing interests of locations of contaminated sites. Notices shall be written in English, Vietnamese, Cantonese and Spanish, and be posted in areas most likely to be seen by fishing interests. **FSH-9c:** If damages to fishing operations or related businesses occur, as a last resort, provide financial compensation. Any losses shall be documented as soon as possible after a spill using methods for determining damages established beforehand. Response should include provisions for compensating operators and businesses as soon as possible. **FSH-9d:** Following a spill, evaluate the effectiveness of oil spill mitigation measures used to respond to a spill caused at the Long Wharf or by tankers calling at the Wharf. Results of the evaluation would be available to public decision-makers to ensure refinement, and if necessary, modification of mitigation measures. Evaluation would be done only after an accident and would include monitoring using scientifically accepted protocols. Costs for the evaluation would be borne by Chevron for spills caused at the Long Wharf or by Chevron-owned tankers. Chevron shall contribute to independent public or private organizations for oil spill research. Contributions would be determined in cooperation with the evaluating organizations, agencies, and the CSLC.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
FSH-10	Significant adverse impacts (Class I and II) to outer coast commercial and sport fisheries could result from oil spill accidents from the expected 900 annual transiting tankers calling at the Chevron Long Wharf. The level of impact would depend on the size of the spill, location, and fisheries occurring in the area of the spill.	I or II	**FSH-10:** Chevron shall implement MM OS-7 for VTS upgrade participation and to provide immediate spill response near/at the terminal. For spills from Chevron owned vessels Chevron officials shall implement FSH-9b through MM FSH-9d to notify fishing interests of possible contamination of fishing areas, to help offset the losses to fishing interests and businesses dependent on fishing activities, and to evaluate effectiveness of mitigation measures.
Section 4.5	**LAND USE AND RECREATION**		
LU-1	The proposed Project would not conflict with any existing or future planned policy issues or plans. Proposed Project impacts with regard to policy inconsistency would be less than significant.	III	None required.
LU-2	Issues related to land use associated with the Refinery and planned trail segments are not within the jurisdiction of the CSLC. Proposed Project land use impacts would be less than significant.	III	None required.
LU-3	A number of recreational facilities (designated parks, wildlife preserves, open space, etc.) and recreational uses (nature viewing, boating, fishing, surfing, etc.) are within the potential area that could be impacted by the spread of oil from releases at or near the Long Wharf. Shoreline and water-related uses would be disrupted by oil on the shoreline and in the water and could result in significant adverse (Class I and II) impacts.	I or II	**LU-3**: Mitigation measures for spills at the Long Wharf would be the responsibility of Chevron USA operations. Specific measures are those presented in Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries.
LU-4	Spills from vessels in transit that beach along sensitive land use areas or heavily used areas including recreational areas would limit or preclude such uses and result in significant adverse (Class I or II) impacts, depending on the various characteristics of a spill and its residual effects.	I or II	**LU-4:** Mitigation measures for accidents in the shipping lanes would not be Chevron USA's responsibility, but would fall to the vessel operator/owner, unless the vessels are owned by Chevron. Chevron USA shall implement measures OS-7a and OS-7b in Operational Safety/Risk of Upset.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.6	**AIR QUALITY**		
AQ-1	No major construction is proposed as part of the 30-year lease. Minor upgrades, maintenance and repairs would be adverse, but less than significant.	III	None required.
AQ-2	Measured and calculated criteria pollutant emissions are below existing yearly BAAQMD permitted levels. Continued operation of the Long Wharf at current throughput levels would not result in significant air quality emissions impacts.	III	None required.
AQ-3	Since the facility is already operational, worker commute emissions are already part of ambient conditions, thus non-permitted emissions impacts are adverse, but less than significant.	III	None required.
AQ-4	Dredging is a permitting activity that is calculated into the Bay Area's baseline conditions. Air quality emissions will not increase from continued dredging activities over the term of the proposed 30-year lease, and are considered adverse, but less than significant.	III	None required.
AQ-5	Over the lease period, a minimal amount of emissions would be associated with Berth No. 4 modifications. Indirect operations emissions would reduce in accordance with the Bay Area CAP and subsequent clean air plans enacted during the lease period. Thus, future operational emissions (both indirect and direct) would result in an adverse, but less than significant impact.	III	None required.
AQ-6	The Long Wharf does not emit odors that are/have been reported in the local area. No sensitive receptors are located in the immediate area. Impacts are adverse, but less than significant.	III	None required.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
AQ-7	The Long Wharf is in compliance with the BAAQMD permitting for hazardous and toxic pollutants. Impacts are adverse, but less than significant.	III	None required.
Section 4.7	**NOISE**		
N-1	Because the Long Wharf already exists, it is considered part of the ambient noise environment. It is located in an industrial area, however sensitive receptors are located along the Pt. Richmond shoreline approximately 1 mile away. Over the lease period, no sensitive receptors are to be constructed proximate to the terminal. Occasional noise complaints from residential receptors result in potentially significant impacts.	I	**N-1:** As a lease condition, Chevron shall either retain an on-call noise consultant or train onsite personnel in the proper use of sound monitoring equipment. When a vessel berths at the wharf that is perceived to have a noise problem, either by Chevron personnel or public notification (resulting from a history of local resident noise complaints), noise measurements shall be obtained to document the noise associated with these ships. If these ships are found to emit noise at a level that exceeds City standards at the residential property line, the vessels' operators shall be notified to determine if the problem can be corrected. If the owner/operator cannot or will not correct the problem, the following shall be implemented: • Chevron shall berth these ships during all subsequent visits at the most distant berth from local receptors that can accept the class of ship and cargo; and • During subsequent visits, these "noisy" ships shall not be allowed to hotel at the wharf during the night beyond the time necessary to load/unload.
N-2	No expansion of Long Wharf operations are expected to occur over the 30-year lease period. Mobile sources of noise associated with future vessel berthing operations are expected to remain similar to current operations. Impacts are adverse, but less than significant.	III	None required.
Section 4.8	**VEHICULAR AND RAIL TRANSPORTATION**		
TR-1	No increase in vehicular traffic from wharf operations would occur during the lease period. Impacts are adverse, but less than significant.	III	None required.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.9 VISUAL RESOURCES/LIGHT AND GLARE			
VR-1	Proposed Project operations involve tanker activity at the existing Long Wharf and vessel transit through established shipping lanes in the Bay. The Long Wharf and Refinery have been in place for a long time, and the proposed Project site is industrial in character. No visual changes from continued operations would occur. Visual impacts or night lighting impacts associated with continued operations are adverse, but less than significant.	III	None required.
VR-2	The visual impacts of a spill at or near the terminal could last for a long period of time, depending on the level of physical impact and cleanup ability, and are considered to be adverse and significant.	I or II	**VR-2:** Mitigation measures for oil spill impacts include those measures for contingency planning and response as presented in Operational Safety/Risk of Upset and Biological Resources.
VR-3	Spills from vessels in transit would change the color and texture of water and shoreline conditions. The level of public sensitivity and expectations of viewers would result in a negative impression of the viewshed and result in significant adverse impacts, depending on the various characteristics of a spill and its residual effects.	I or II	**VR-3:** Mitigation measures for accidents in the shipping lanes would be Chevron's responsibility only for Chevron-owned vessels. Responsibility for accidents for non-Chevron owned vessels would fall to the vessel operator/owner. Chevron shall implement measures OS-7a and OS-7b in Operational Safety/Risk of Upset.
Section 4.10 CULTURAL RESOURCES – No impacts to Cultural Resources			
Section 4.11. GEOLOGICAL RESOURCES/STRUCTURAL INTEGRITY			
GEO-1	The Long Wharf is not located in the Alquist-Priolo earthquake fault zone. Surface rupture from known active faults is not anticipated, and impacts would be less than significant. Seismically induced landsliding is unlikely as the underlying sea bottom is relatively flat.	III	None required.
GEO-2	Upgrades have been completed at the Long Wharf that conform to CSLC's MOTEMS. Potential impacts from groundshaking are adverse, but less than significant.	III	None required.

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
GEO-3	Bay Mud beneath the wharf is considered non-liquefiable; therefore, the impact of liquefaction on the structure would be less than significant (Class III). Seismically induced settlement was taken into account for the seismic retrofit design and structural upgrade program. Thus, impacts associated with seismically induced settlement have been addressed and the potential for impact is adverse, but less than significant.	III	None required.
GEO-4	Long Wharf operators may not have adequate warning time to allow a vessel to depart from the wharf to avoid damage to the vessel and/or the wharf from a tsunami. Impacts are considered significant adverse impacts.	II	**GEO-4:** As soon as possible, after notification of a tsunami, Long Wharf operators shall release the vessel from its mooring and the vessel shall move away from the wharf, when the Captain determines that it is safe and feasible to do so.
GEO-5	Upgrades to the various structures of the wharf have been completed and meet the level prescribed in the CSLC MOTEM's. As completed, there are no adverse impacts associated with the Long Wharf.	III	None required.
GEO-6	A preliminary analysis indicates that the structural capacity of the breasting dolphins and the main wharf would need to be increased in order to berth/moor larger vessels at Berth No. 4. Compliance with MOTEMS will assure that ~~Significant, adverse impacts (Class II) could occur without~~ proper design and construction of seismic improvements are addressed ~~ing this potential~~ for larger vessels at Berth No. 4.	III	None required. ~~**GEO-6:** Additional mooring and structural analysis will be required and results implemented prior to the berthing of larger double-hulled vessels at Berth No. 4.~~

Table ES-1 (continued)
Summary of Environmental Impacts for the Proposed Project

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4. 12 SOCIOECONOMICS			
SOC-1	Impacts from oil releases could degrade the environment and preclude the use of shoreline land and associated recreational activities. Potential socioeconomic implications would include any area, structure, or facility that could experience business interruption and loss of revenue as a result of a spill and resultant cleanup operations. ~~Impacts could be Class I or II, depending on severity of impact.~~ Monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act would be applied to mitigate the loss of revenue. Since this requirement is established, impacts would be adverse, but less than significant (Class III).	III	None required. ~~**SOC-1:** Mitigation would be in the form of monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act.~~
Impact No.	**Impact**	**Impact Class**	**Recommended Mitigation Measures**
Section 4.13 ENVIRONMENTAL JUSTICE			
EJ-1	The Long Wharf area of potential impact does not include an area identified as an MTC-Minority Zone and Area of Poverty, or an area of Meaningfully Greater Minority or Low-Income Population. However, preclusion of affected populations from fishing areas over an extended period of time could be considered disproportionate, particularly if such populations do not have the ability to go to uncontaminated areas nearby and depend on fishing as a food source.	II	**EJ-1**: Should an oil spill from the Long Wharf extend beyond 0.5 mile from the Terminal and preclude ~~sport~~ subsistence fishing by members of minority and/or low income communities for more than two days, Chevron U.S.A., Inc. shall contribute either funds or food stuffs to a local food bank in an amount sufficient, as determined in conjunction with the CSLC, to replace food sources that would have been supplied within the affected areas.

Impact Class
I = Significant adverse impact that remains significant after mitigation.
II = Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
III = Adverse impact that does not meet or exceed an issue's significance criteria.
IV = Beneficial impact.

Table 6-1
Mitigation Monitoring Program – Operational Safety/Risk of Upset

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
OS-3: Chevron's response capability for containment of spills during transfer operations would result in adverse and significant impacts for spills greater than 50 bbls. Consequences would range from spills that can be contained during first response efforts with rapid cleanup (Class II), to those complex spills that result in a significant impact (Class I) with residual effects after mitigation.	~~**OS-3a:** Provide quick release devices that would allow a vessel to leave the wharf as quickly as possible in the event of an emergency (fire, accident, or tsunami that could lead to a spill) that could impact the wharf or the vessel.~~	~~CSLC monitor to observe devices after installation.~~	~~Reduces potential for damages and spills. In the event of an emergency, the Long Wharf will able to quickly release a vessel to prevent spread of oil.~~	~~CSLC~~	~~Within 12 months of lease implementation.~~
	OS-3b: Install tension-monitoring devices at Berth 1 to monitor mooring lines and avoid excessive tension or slack conditions that could result in spills. An alarm system (visual and sound) that incorporates communication to the control-building operator shall also be a part of the system. In addition, if any vessel drifts (surge or sway) more than 7 feet from its normal manifold or loading arm position at any other terminal berth, Chevron shall install, within 6 months after the incident, tension-monitoring devices at such berth.	CSLC monitor to observe devices after installation.	Reduces potential for damages and spills.	CSLC	Within 12 months of lease implementation, unless otherwise specified. If any vessel drifts more than 7 feet from its normal position, install within 6 months of occurrence.
	OS-3c: Install Allision Avoidance System (AAS) at the terminal to prevent damage to the pier and/or vessel during docking operations. Prior to implementing this measure, Chevron shall consult with the San Francisco Bar Pilots, the U.S Coast Guard, and the staff of the CSLC and provide information that would allow the CSLC to determine, on the basis of such consultations and information regarding the nature, extent and adequacy of the existing berthing system, the most appropriate application and timing of an AAS at the Chevron Long Wharf.	CSLC monitor to observe devices after installation.	Reduces potential for damages and spills.	CSLC	Within 12 months of lease implementation, unless otherwise specified.

Table 6-1 (continued)
Mitigation Monitoring Program – Operational Safety/Risk of Upset

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	~~**OS-3d:** Develop a comprehensive preventative maintenance program that includes periodic inspection of all components related to transfer operations. The program shall be subject to California State Lands Commission review and approval.~~	~~Chevron shall submit program for review and approval to CSLC~~	~~Reduces potential for damages and spills~~	~~CSLC~~	~~Within 12 months of lease implementation.~~
OS-4: Group V oils have a specific gravity greater than 1 and do not float on the water; instead, they will sink below the surface into the water column or possibly to the bottom. Chevron states in their Spill Preparedness and Emergency Response Plan that no reasonable technology currently exists for a Group V response in the San Francisco Bay. Thus, a release of a Group V oil could result in significant impacts (Class I).	**OS-4:** Chevron shall confer with the California State Lands Commission (CSLC) regarding Group V oil spill response technology including potential new response equipment and techniques that may be applicable for use at the Long Wharf. Chevron shall work with the CSLC in applying these new technologies, as agreed upon, if recommended for this facility**.**	Chevron shall submit biannual report on status of new technology and equipment to CSLC.	Provides flexibility in lease to up MM and improve response capability.	CSLC	Submit biannual report for life of lease.
OS-5: Spills from the terminal during non-transfer periods would be associated with pipelines and are considered a significant (Class II) impact if spills are less than 50 bbls, or significant (Class I) impacts for spills greater than 50 bbls.	**OS-5:** ~~Implement MM OS-3d~~ MOTEMS has established requirements for preventative maintenance that include periodic inspection of all components related to transfer operations. Chevron is required to comply with those requirements. Mitigation is no longer required.	~~See MM OS-3d.~~	~~See MM OS-3d.~~	~~See MM OS-3d.~~	~~See MM OS-3d~~

Table 6-1 (continued)
Mitigation Monitoring Program – Operational Safety/Risk of Upset

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
OS-6: Public areas are beyond the hazard footprint boundary; thus fires and explosions would not cause a public safety risk. However, the Wharf's Operations Manual does not address fire emergency procedures and a fire and/or explosion could lead to a release of oil. ~~A significant adverse impact has been identified (Class II).~~ Since MOTEMS became effective, February 6, 2006, Chevron is required to be consistent with the requirements of sections 3102F3.8 and 3108F2.2 of 24 CCR, Part 2, California Building Code, Chapter 31F for a MOT Fire Plan.	~~**OS-6a:** Chevron shall implement MM OS-3a to provide for quick release devices that would allow a vessel to depart the wharf quickly and help in the event of a fire.~~	~~See MM OS-3a.~~	~~See MM OS-3a.~~	~~See MM OS-3a.~~	~~See MM OS-3a.~~
	OS-6b: Chevron shall develop a set of procedures and conduct training and drills for dealing with tank vessel fires and explosions for tankers berthed at the Long Wharf. The procedures should include the steps to follow in the event of a tank vessel fire and describe how Chevron and the vessel will coordinate activities. The procedures shall also identify other capabilities that can be procured if necessary in the event of a major incident. The procedures shall be submitted to the U.S. Coast Guard and California State Lands Commission within 90 days of lease renewal. ~~The plan shall be consistent with the requirements of section 3108F2.2 of 24 CCR, Part 2, California Building Code, Chapter 31F.~~	Chevron shall prepare and submit procedures to CSLC and US Coast Guard for review and approval.	Provides planning and procedures for emergency response.	CSLC	Submit to CSLC within 90 days of lease implementation.

Table 6-1 (continued)
Mitigation Monitoring Program – Operational Safety/Risk of Upset

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
OS-7: Spills from accidents in the Bay could result in impacts to water quality or biological resources that could be significant adverse (Class II) impacts for those that can be contained during first response efforts; or significant adverse (Class I) impacts that would have residual impacts. While Chevron does not have legal responsibility for tankers it does not own, it does have responsibility to participate in improving general response capabilities.	**OS-7a:** Chevron shall participate in an analysis to determine the adequacy of the existing VTS in the Bay Area, if such a study is conducted by a Federal, State, or local agency during the life of the lease. Agencies such as the San Francisco Bay Harbor Safety Committee often conduct studies of safety issues within the Bay Area. As vessel traffic increases in and around the Bay Area and as technology improves, it may be necessary and feasible to upgrade and expand the VTS in and around the Bay Area. Chevron shall participate in this analysis and contribute a pro-rata share toward the upgrade and expansion of the system, if required to do so by the CSLC.	This shall be implemented as a lease condition. Chevron shall demonstrate to CSLC their participation in program strategies to protect sensitive resources.	Reduces potential damage to resources.	CSLC	Life of lease.
	OS-7b: Chevron shall respond to any spill <u>from a vessel traveling to or from the wharf, moored at its wharf, related in any way to the wharf, or carrying cargo owned by Chevron,</u> as if it were its own, without assuming liability, until such time as the vessel's response organization can take over management of the response actions in a coordinated manner.	This shall be implemented as a lease condition. CSLC monitor to observe emergency actions.	Reduces potential damage to resources.	CSLC	Life of lease.

Table 6-2
Mitigation Monitoring Program – Water Quality

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
WQ-2: Discharge of ballast water that contains harmful microorganisms could impair several of the project area's beneficial uses, including commercial and sport fishing, estuarine habitat, fish migration, preservation of rare and endangered species, water contact recreation, non-contact water recreation, fish spawning, and wildlife habitat. Therefore discharge of segregated ballast water is determined to have a potentially significant impact to water quality (Class I).	**WQ-2:** Following the adoption of the Mitigation Monitoring Program for the proposed Project, Chevron will advise both agents and representatives ~~representing vessels that have called at the Long Wharf as of the date of adoption of the cited Mitigation Monitoring Program, and Chevron will advise representatives~~ of shipping companies having control over or representing vessels that have informed Chevron of plans ~~would be likely~~ to call at the Long Wharf ~~in the future~~ about the California Marine Invasive Species ~~Control~~ Act. Chevron will ensure that a Questionnaire containing the following questions is provided to the Vessel Operator, and inform the Vessel Operator that the Questionnaire should be completed on behalf of the vessel, by its Captain or authorized representative. The Questionnaire shall solicit the following information: 1. Does the vessel intend to discharge ballast water in San Francisco Bay, the Carquinez Strait or any other location(s) in a Bay waterway on its transit to the Chevron Richmond Long Wharf? 2. Does the vessel intend to discharge ballast water at the Chevron Richmond Long Wharf?	Chevron shall submit the completed questionnaires to the California State Lands Commission's Marine Facilities Division's Northern California Field and Sacramento Offices, either electronically or by facsimile, prior to the vessel's entry into San Francisco Bay or in the alternative, at least 24 hours prior to the vessel's arrival at the Long Wharf.	This measure will provide a tracking mechanism for ballast water management which shall remain in effect until such time that more stringent requirements are developed.	CSLC	Life of lease

Table 6-2 (continued)
Mitigation Monitoring Program – Water Quality

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	3. Which of the following means specified in the California Marine Invasive Species Act (MISA) or Title 2, Division 3, Chapter 1, Article 4.6. has the vessel operator used or intend to use on the current voyage to manage the vessel's ballast water: a mid-ocean exchange (as defined in Section 71200(g)); a near-coastal exchange (as defined in Section 71201(b)); retain all ballast on board; or discharge the ballast water at the same location (as defined in Section 71204.2(c)(2)) where ballast originated, provided ballast water was not mixed with ballast water taken on in an area other than mid-ocean waters?				
WQ-5: Non-segregated ballast water that is sent to the treatment facility may include nonindigenous organisms. Treatment at the facility does not include any specific procedures to prevent organisms that may be in ballast water from being discharged to Bay waters. Discharge of harmful microorganisms would be a significant adverse impact (Class II).	**WQ-5:** Chevron shall not discharge any non-segregated ballast water received at the Long Wharf to San Francisco Bay. If Chevron needs to unload non-segregated ballast water, it shall be unloaded into a tanker truck or other suitable waste handling vehicle and disposed of at an appropriate facility.	This shall be implemented as a lease condition.	Reduces potential damage to resources.	CSLC	Life of lease.

Table 6-2 (continued)
Mitigation Monitoring Program – Water Quality

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
WQ-7: Marine anti-fouling paints are highly toxic containing copper, sodium, zinc, and tributyltin (TBT) and their use on vessels associated with the Long Wharf is considered to be a significant adverse impact to water quality that cannot be mitigated to less than significant (Class I).	**WQ-7:** Following the adoption of the Mitigation Monitoring Program for the proposed Project, Chevron will advise both agents and representatives of shipping companies having control over or representing vessels that have informed Chevron of plans to call at the Long Wharf ~~as of the date of adoption of the cited Mitigation Monitoring Program, and vessel representatives that would be likely to call at the Long Wharf in the future~~ about the requirements of the 2008 International Maritime Organization (IMO) prohibition of TBT applications to vessel hulls. Following the effective date of the IMO prohibition, Chevron will ensure that the Master (Captain) or authorized representative of vessels intending to call at the Long Wharf certify that their vessel is in compliance and provide a copy of such certification to the California State Lands Commission's Marine Facilities Division's Northern California Field and Sacramento Offices, either electronically or by facsimile, prior to the vessel's entry into San Francisco Bay or in the alternative, at least 24 hours prior to the vessel's arrival at the Long Wharf.	Chevron shall require vessels to document that they have no new TBT applications (per IMO mandate). Documentation shall be kept at Chevron, available for CSLC inspection.	Until all TBT is phased out by 2008, vessels with old applications of TBT on their hulls will visit Chevron. Chevron cannot feasibly require vessels to remove TBT from their hulls (until the IMO mandate is effective). Therefore, until all TBT is gone from vessels using the Chevron marine terminal, impacts of organotins will remain.	CSLC	Life of lease.

Table 6-2 (continued)
Mitigation Monitoring Program – Water Quality

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
WQ-8: Routine vessel maintenance would have the potential to degrade water quality due to chronic spills during transfers of lubricating oils, resulting in adverse significant (Class II) impacts.	**WQ-8:** MM WQ-9 applies, which addresses preparation of Best Management Practices (BMPs) in a SWPPP for the Long Wharf.	See MM WQ-9.	See MM WQ-9.	See MM WQ-9.	See MM WQ-9.
WQ-9: Stormwater runoff from the Long Wharf may contribute pollutants to the Bay in concentrations that may adversely affect some benthic species within the local area, resulting in a significant adverse impact (Class II) to water quality.	**WQ-9:** Chevron shall coordinate with the Regional Water Quality Control Board to develop a Stormwater Pollution Prevention Plan that Chevron shall prepare specifically for the Long Wharf ~~Implement BMPs~~ to reduce the input of chemicals to the Bay from the marine terminal. BMPs for consideration shall include (at a minimum) (1) conducting all vehicle maintenance on land not over water or marshland, (2) berming all areas on the pier where maintenance activities are being conducted and cleaning up all spilled contaminants before berms are removed, (3) when necessary, washing the surface of the pier to the extent practical and directing washwater into sumps, (4) maintenance of sumps, and (5) posting signs to educate all workers to the importance of keeping contaminants from entering the Bay. These and other BMPs shall be detailed in a Stormwater Pollution Prevention Plan that Chevron shall prepare specifically for the Long Wharf.	These BMPs shall de detailed in a SWPPP that Chevron shall prepare specifically for the marine terminal and submit to CSLC for approval.	Aggressive implementation of BMPs to reduce the input of chemicals to the Bay from operations on the Long Wharf would reduce Chevron's input of these chemicals.	CSLC	Prepare SWPPP within 12 months of lease implementation. Maintain SWPPP, update as necessary for life of lease.

Table 6-2 (continued)
Mitigation Monitoring Program – Water Quality

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
WQ-11: Potential impacts on water quality can result from leaks or spills. Small leaks or spills (less than 50 bbl) related to Long Wharf operations could result in significant (Class II) impacts, while large spills (greater than 50 bbl) could result in significant adverse impacts (Class I).	**WQ-11:** MM OS-3b~~a~~ and ~~through~~ MM OS-3c~~d~~ (Operational Safety/Risk of Upset) and MM OS-4 shall be implemented.	See MM OS-3b ~~a, through~~ MM OS-3c~~d~~ and MM OS-4.	See MM OS-3b ~~a, through~~ MM OS-3c~~d~~ and MM OS-4.	See MM OS-3b a, through MM OS-3c~~d~~ and MM OS-4.	See MM OS-3b ~~a, through~~ MM OS-3c~~d~~ and MM OS-4.
WQ-12: A significant impact to water quality (Class I or II) could result from leaks or an accidental spill of crude oil or oil product from a vessel spill along tanker routes either in San Francisco Bay or outer coast waters.	**WQ-12:** The Long Wharf shall implement MM OS-7a and OS-7b of Section 4.1, Operational Safety/Risk of Upset Section, addressing potential participation in VTS upgrade evaluations, and Chevron response actions for spills at or near the Long Wharf.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b

Table 6-3
Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
BIO-3: Loss of juvenile Dungeness crabs and young Chinook salmon would be a significant, adverse impact because dredging at the time when juveniles are moving through the area could disrupt the migration patterns of these species (Class II). Because of the low volume of material dredged, adverse, but less than significant impacts (Class III) occur to plankton, other benthos, other fishes, and birds.	**BIO-3a:** The Long Wharf shall schedule dredging to avoid the months of May and June when juvenile Dungeness crabs are most abundant in the Project area. In the event that, due to circumstances beyond lessee's control, dredging must occur in May and June to maintain a depth for safe navigation and operation of the terminal, lessee shall consult with the California Department of Fish and Game (CDFG) regarding the potential effects of such dredging on juvenile Dungeness Crabs and Chinook salmon smolts. Such consultation may occur directly with CDFG personnel in Region 3 or with CDFG personnel during the consideration of lessee's application to the Dredged Material Management Office (DMMO). If the CDFG concurs with dredging as proposed by the lessee, documentation of which shall be provided to Lessor, it shall be conclusively presumed that juvenile Dungeness Crabs and Chinook salmon smolts will not be significantly affected, and dredging may proceed as provided herein.	Chevron shall coordinate with the CSLC and U.S. Army Corps of Engineers (Corps) who are the dredging permit holders on the scheduling of dredging operations.	Reduces potential impacts to juvenile Dungeness crabs.	CSLC	Prior to dredging.
	BIO-3b: To avoid impacts to Pacific herring reproduction, the Long Wharf shall schedule dredging to avoid the herring spawning season of December through February and into March.	Chevron shall coordinate with the CSLC and U.S. Army Corps of Engineers (Corps) who are the dredging permit holders on the scheduling of dredging operations.	Reduces impacts to Pacific herring reproduction.	CSLC	Prior to dredging.

Table 6-3 (continued)
Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	BIO-3c: Although chances of entrainment of salmon is relatively low, to protect the salmon, the Long Wharf shall schedule dredging in June through November when winter and spring run Chinook salmon smolt activity is lowest.	Chevron shall coordinate with the CSLC and U.S. Army Corps of Engineers (Corps) who are the dredging permit holders on the scheduling of dredging operations.	Reduces impacts to Chinook salmon smolt.	CSLC	Prior to dredging.
BIO-4: Invasive organisms/introduction of non-indigenous species in ballast water released in the Bay could have significant (Class I) impacts to plankton, benthos, fishes, and birds.	**BIO-4:** Implement MM WQ-2, in Water Quality, that requires that Chevron comply with the California Marine Invasive Species ~~Control~~ Act and related California State Lands Commission requirements and the Ballast Water Management for Control of Non-Indigenous Species Act and fill out a questionnaire to enable the CSLC to better track the management of ballast water. Implement Mitigation Measure WQ-5 requiring segregated ballast water be unloaded to a suitable wastehandling vehicle and disposed of at an appropriate facility rather than being treated at the Chevron facility shall apply.	See MM WQ-2 and MM WQ-5.	See MM WQ-2 and MM WQ-5.	See MM WQ-2 and MM WQ-5.	See MM WQ-2 and MM WQ-5.

Table 6-3 (continued)
Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria`	Responsible Agency	Timing
BIO-6: The impacts of a spill on the biota at or near the Long Wharf have the potential to spread throughout much of San Francisco Bay. Vulnerable biota are plankton, benthos, eelgrass, fishes, marshes, birds, and mammals. Per Section 4.1, Operational Safety/Risk of Accidents, small spills at the Long Wharf (less than 50 bbls) should be able to be contained (Class II impacts). However, spills larger than 50 bbls may not be able to be contained and the Long Wharf may not have adequate boom to protect all the sensitive areas at the most risk that could be oiled within 3 hours of a spill from the Long Wharf. Impacts from large spills are considered to be significant adverse (Class I) impacts. A significant impact to biological resources (Class I or II impact) could result from spills of crude oil or product from a vessel in transit along tanker routes either in San Francisco Bay or outer coast waters.	**BIO-6a:** Implement MM OS-3b,~~a through~~ MM OS-3c,~~d~~ and MM OS-4 in Operational Safety/Risk of Accidents to either lower the probability of an oil spill or increase response capability.	See MM OS-3 b-c and MM OS-4.	See MM OS-3b-c ~~a-d~~ and MM OS-4.	See MM OS-3 b-c ~~a-d~~ and MM OS-4.	See MM OS-3 b-c ~~a-d~~ and MM OS-4.
	BIO-6b: Chevron shall demonstrate to the satisfaction of the California State Lands Commission (CSLC) that the Long Wharf can successfully implement its Oil Spill Response Plan and can deploy within 3 hours all the boom necessary to simultaneously protect all the sensitive resources at risk of contact with oil within 3 hours from a spill at the Long Wharf. Sensitive resources close to the Long Wharf include Castro Rocks, eelgrass beds, and the double-crested cormorant breeding colony on the Richmond-San Rafael Bridge. Procedures for the protection of Castro Rocks and eelgrass beds are detailed in the Area Contingency Plan (USCG and OSPR 1997). Chevron shall obtain the 15,000 feet (2.8 miles) of boom necessary to protect the Richmond eelgrass beds and Castro Rocks simultaneously from a spill at the Long Wharf. Chevron shall survey for eelgrass annually in the Richmond area and identify the places where substantial amounts of eelgrass currently grow. Chevron shall implement drills specifically designed to deploy and anchor booms simultaneously to protect immediately Castro Rocks and the Richmond eelgrass beds from oil. Because a spill could reach these areas rapidly, Chevron should have immediate access to the equipment and personnel detailed in the Area Contingency Plan.	CSLC monitor to observe that Chevron has the boom deployment capability.	Reduces spread of spill and damages to resources.	CSLC	Within 12 months of lease implementation.

Table 6-3 (continued)
Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria`	Responsible Agency	Timing
	BIO-6c: Have procedures ~~should be~~ in place to flush double-crested cormorants from the waters contaminated by oil with capability ~~Arrangements should be made~~ to quickly bring expert bird rehabilitators to the site to rescue oiled birds. Provide the CSLC with copies of proof of existing arrangements with specialized wildlife handlers and update every three years.	Develop procedures to be in place to flush double-crested cormorants from oil contaminated water.	Reduces potential damages to birds.	CSLC	Within 12 months of lease implementation, with updates every three years.
	BIO-6d: Chevron shall ensure that adequate equipment and personnel are available to protect the Castro Creek marshes, San Pablo Creek marshes, Pinole Pt. marshes and the southeastern San Pablo Bay mudflats within 8 hours of a spill at the Long Wharf. The strategy to protect each of these sensitive resources shall be tested with a field demonstration of deployment and placement of booms and other equipment in locations designated in the Area Contingency Plan to protect these sensitive habitats.	Chevron shall develop strategy and demonstrate to CSCL that it has resources to deploy and protect marshes within 8 hours of spill.	Reduces potential damage from oil spills.	CSLC	Within 12 months of lease implementation.
	BIO-6e: When a spill occurs, develop procedures for clean up of any sensitive biological areas contacted by oil, in consultation with biologists from California Department of Fish and Game and U.S. Fish and Wildlife Service, to avoid damage from clean up activities.	Chevron shall provide documentation of damage and clean up strategy as soon as possible after a large spill to CSLC, CDFG and USFWS.	This will ensure that the loss of resources is documented as soon as possible after a large spill event.	CSLC, CDFG, and USFWS	Documentation of damage and strategy as soon as possible after a spill.

Table 6-3 (continued)
Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria`	Responsible Agency	Timing
	BIO-6f: Chevron shall work with the Natural Resource Damage Assessment (NRDA) team, as the team may request, to determine of the extent of damage and loss of resources, cleanup, restoration and compensation. Chevron shall keep the CSLC informed of their participation in such efforts, by providing copies of memos, meeting agendas, or other appropriate documentation, including e-mails. ~~If damage occurs, the last resort is restoration and compensation. Any loss of resources shall be documented as soon as possible after a large spill. The sampling methods and design should be determined beforehand, and the plan should include provisions for getting resources onsite as soon as possible so that post-spill studies can begin immediately.~~	Chevron shall provide sampling methods and a design protocol plan to CSLC for review and approval.	This will ensure that the loss of resources is restored and/or compensated in the most appropriate manner.	CSLC, CDFG, and USFWS	Sampling methods and protocol within 12 months of lease implementation and update every 2 years.
	BIO-6g: Chevron shall implement MM OS-7a and MM OS-7b in Operational Safety/Risk of Accidents addressing potential participation in VTS upgrade evaluations, and Chevron response actions for spills at or near the Long Wharf.	See MM 0S-7a and MM OS-7b.	See MM 0S-7a and MM OS-7b.	See MM 0S-7a and MM OS-7b.	See MM 0S-7a and MM OS-7b.

Table 6-4
Mitigation Monitoring Program – Commercial and Sports Fisheries

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
FSH-1: Space use conflicts between Long Wharf routine operations and commercial herring fishing could occur resulting in interference or displacement of herring fishing activities. Impacts would range from significant (Class II) to adverse, but less than significant (Class III), depending on herring spawning locations, fishing operations and other factors.	**FSH-1:** Chevron shall participate in the Pacific herring commercial fishery annual public scoping and hearing process, part of CDFG's annual review of herring commercial fishing regulations. Because CDFG has the authority to modify or develop regulations to address space use conflicts between the fishery and Chevron's operations, Chevron shall abide by any future regulations CDFG may develop to reduce space use impacts.	Chevron shall demonstrate to CSLC their activities by providing proof of participation.	Reduces Chevron-bound vessels potential for conflict.	CSLC	Annual reporting for life of lease.
FSH-2: Space use conflicts between transiting vessels serving the Long Wharf and commercial herring operators could occur, resulting in interference or displacement of herring fishing activities. A significant impact could result (Class II).	**FSH-2:** Long Wharf officials shall notify herring operators during the herring fishing season of vessel transits, through the CDFG Directors Herring Advisory Committee or other means. Chevron shall also participate MM FSH-1.	Chevron shall demonstrate to CSLC their activities by providing copies of notices.	Reduces Chevron-bound vessels potential for conflict.	CSLC	Annual reporting for life of lease.
FSH-6: Fisheries depend on a healthy environment to survive and flourish. Invasive species discharged from ballast water could impair water quality (Impacts WQ-2 and WQ-5) and biological resources (Impact BIO-4). These impacts to fisheries resources would impair commercial and sport fishing activities in the Bay and along the outer coast, resulting in significant adverse (Class I) impacts.	**FSH-6a:** Long Wharf officials shall: (1) carry out MM WQ-2 and MM WQ-5 for completion of a ballast water reporting form for each vessel, advisories about the California Marine Invasive Species Control Act and proper disposal of non-segregated ballast water.	See MM WQ-2 and MM WQ-5.	See MM WQ-2 and MM WQ-5.	See MM WQ-2 and MM WQ-5.	See MM WQ-2 and MM WQ-5.

Table 6-4 (continued)
Mitigation Monitoring Program – Commercial and Sports Fisheries

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	FSH-6b: Chevron shall participate and assist in funding ongoing and future actions related to invasive species and identified in the October 2005 Delta Smelt Action Plan (State of California 2005). The funding support shall be provided to the Pelagic Organism Decline Account or other account identified by the California Department of Water Resources and Department of Fish and Game, lead Action Plan agencies. The level of funding shall be determined through a cooperative effort between CSLC, and the Departments of Water Resources and Fish and Game and shall be based on criteria that establishes Chevron's commensurate share of the Plan's invasive species actions costs.	Chevron shall demonstrate to CSLC their participation in relevant programs. Contributions would be determined through cooperative effort.	Will keep Chevron and CSLC up-to-date on causes of species declines and solutions. Will provide funding support to the Pelagic Organism Decline Account or other account identified by DWR or CDFG.	DWR, CDFG	Life of lease.
FSH-8: Continuation of maintenance dredging at the Long Wharf is expected to cause Class III impacts on sport fishing activities and Class II impacts on herring spawning and fishing, Dungeness crab and salmon resources. New dredging to accommodate larger, double-hulled tankers is expected to cause impacts similar to those caused by routine operations at the Long Wharf (Class II and Class III).	**FSH-8:** Chevron officials shall comply with MM BIO-3 which calls for scheduling dredging during times of the year to avoid juvenile Dungeness crab, spring run Chinook salmon and herring spawning activity. In the event that dredging must occur in May and June (times to avoid for crab and salmon resources), MM BIO-3 requires consultation with CDFG and notification to CSLC.	See MM BIO-3.	See MM BIO-3.	See MM BIO-3.	See MM BIO-3.

Table 6-4 (continued)
Mitigation Monitoring Program – Commercial and Sports Fisheries

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
FSH-9: Shrimp, herring and sport fisheries in central and north San Francisco Bay, San Pablo Bay, Carquinez Strait and elsewhere in the estuary are at highest risk of spill contamination. Depending on spill location, size and water and weather conditions, areas upstream of the confluence of the Sacramento and San Joaquin rivers may also suffer harm. In addition marinas, launch ramps and fishing access points in the Bays may be threatened, contaminated or closed. Significant adverse impacts (Class I and II) to Bay commercial and sport fisheries would result from oil spill accidents originating at the Long Wharf or from tankers transiting the coast that service the wharf.	**FSH-9a:** Implement MM OS-3, MM OS-4, and MM OS-7 in Operational Safety/ Risk of Accidents, and MM BIO-6b and BIO-6d in Biological Resources, to lower the probability of any oil spill and increase response capability.	See MM OS-3, MM OS-4, MM OS-7, MM BIO-6b and BIO-6d.	See MM OS-3, MM OS-4, MM OS-7, MM BIO-6b and BIO-6d.	See MM OS-3, MM OS-4, MM OS-7, MM BIO-6b and BIO-6d.	See MM OS-3, MM OS-4, MM OS-7, MM BIO-6b and BIO-6d.
	FSH-9b: Notifications shall be posted at spill sites and marinas, launch ramps and fishing access points to warn fishing interests of locations of contaminated sites. Notices shall be written in English, Vietnamese, Cantonese and Spanish, and be posted in areas most likely to be seen by fishing interests.	CSLC monitor to observe notice postings.	Provides notification to local anglers of potential areas of contamination.	CSLC	Life of lease.
	FSH-9c: If damages to fishing operations or related businesses occur, the last resort is to provide financial compensation. Any losses shall be documented as soon as possible after a spill. Methods for determining damages should be determined beforehand and response should include provisions for compensating operators and businesses as soon as possible.	CSLC, OSPR, to be commensurate with Chevron's contribution of impacts.	Helps to fund programs for restoration or compensation.	CSLC, OSPR	After a spill event, as warranted.

Table 6-4 (continued)
Mitigation Monitoring Program – Commercial and Sports Fisheries

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	FSH-9d: Following a spill, evaluate the effectiveness of oil spill mitigation measures used to respond to a spill caused at the Long Wharf or by tankers calling at the Wharf. Results of the evaluation would be available to public decision-makers to ensure refinement, and if necessary, modification of mitigation measures. Evaluation would be done only after an accident and would include monitoring using scientifically accepted protocols. Costs for the evaluation would be borne by Chevron for spills caused at the Long Wharf or by Chevron-owned tankers. Chevron shall contribute to independent public or private organizations for oil spill research.	Chevron to provide input to assist CSLC in evaluation following a spill. Contributions would be determined in cooperation with the evaluating organizations, agencies, and the CSLC.	Helps to develop more effective mitigation measures.	CSLC	After spills for life of lease.
FSH-10: Significant adverse impacts (Class I and II) to outer coast commercial and sport fisheries could result from oil spill accidents from the expected 900 transiting tankers calling at the Long Wharf. The level of impact would depend on the size of the spill, location, and fisheries occurring in the area of the spill.	**FSH-10:** Chevron shall implement MM OS-7 for VTS upgrade participation and to provide immediate spill response near/at the terminal. For spills from Chevron owned vessels Chevron officials shall implement FSH-9b through MM FSH-9d to notify fishing interests of possible contamination of fishing areas, to help offset the losses to fishing interests and businesses dependent on fishing activities, and to evaluate effectiveness of mitigation measures.	See MM OS-7, MM FSH-9a through MM FSH-9d.	See MM OS-7, MM FSH-9a through MM FSH-9d.	See MM OS-7, MM FSH-9a through MM FSH-9d.	See MM OS-7, MM FSH-9a through MM FSH-9d.

Table 6-5
Mitigation Monitoring Program – Land Use

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
LU-3: A number of recreational facilities (designated parks, wildlife preserves, open space, etc.) and recreational uses (nature viewing, boating, fishing, surfing, etc.) are within the potential area that could be impacted by the spread of oil. Shoreline and water-related uses would be disrupted by oil on the shoreline and in the water and could result in significant adverse (Class I and II) impacts.	**LU-3:** Mitigation measures for spills at the Long Wharf would be the responsibility of Chevron operations. Specific measures are those presented in Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries.	Chevron shall implement measures presented in Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries.	The measures provide for enhanced response capability and protection. Impacts may remain significant depending on effectiveness of first response.	As per referenced measures.	As per referenced measures.
LU-4: Spills that beach along sensitive land use areas or heavily used areas including recreational areas would limit or preclude such uses and result in significant adverse (Class I or II) impacts, depending on the various characteristics of a spill and its residual effects.	**LU-4:** Mitigation measures for accidents in the shipping lanes would not be Chevron's responsibility, but would fall to the vessel operator/owner, unless the vessels are owned by Chevron. Chevron shall implement measures OS-7a and OS-7b in Operational Safety/Risk of Upset.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.

Table 6-6
Mitigation Monitoring Program – Noise

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
N-1: Because the Long Wharf already exists, it is considered part of the ambient noise environment. It is located in an industrial area, however sensitive receptors are located along the Pt. Richmond shoreline approximately 1 mile away. Over the lease period, no sensitive receptors are to be constructed proximate to the terminal. Occasional noise complaints from residential receptors result in Class I impacts.	**N-1:** As a lease condition, Chevron shall either retain an on-call noise consultant or train onsite personnel in the proper use of sound monitoring equipment. When a vessel berths at the Long Wharf that is perceived to have a noise problem, either by Chevron personnel or public notification (resulting from a history of local resident noise complaints), noise measurements shall be obtained to document the noise associated with these ships. If these ships are found to emit noise at a level that exceeds City standards at the residential property line, the vessels' operators shall be notified to determine if the problem can be corrected. If the owner/operator cannot or will not correct the problem, the following shall be implemented: • Chevron shall berth these ships during all subsequent visits at the most distant berth from local receptors that can accept the class of ship and cargo; and • During subsequent visits, these "noisy" ships shall not be allowed to hotel at the Long Wharf during the night beyond the time necessary to load/unload.	This shall be implemented as a lease condition.	Will identify source(s) of noise and work to reduce or avoid noise issues.	CSLC	Life of lease.

Table 6-7
Mitigation Monitoring Program – Visual Resources/Light and Glare

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
VR-2: The visual impacts of a spill could last for a long period of time, depending on the level of physical impact and cleanup ability, and are considered to be adverse and significant (Class I or II).	**VR-2:** Mitigation measures for oil spill impacts include those measures for contingency planning and response as presented in Operational Safety/Risk of Upset and Biological Resources.	Chevron shall implement measures presented in Operational Safety/Risk of Upset; Water Quality; Biological Resources; and Commercial and Sport Fisheries.	The measures provide for enhanced response capability and protection. Impacts may remain significant depending on effectiveness of first response.	As per referenced measures.	As per referenced measures.
VR-3: Spills would change the color and texture of water and shoreline conditions. The level of public sensitivity and expectations of viewers would result in a negative impression of the viewshed and result in significant adverse (Class I or II) impacts, depending on the various characteristics of a spill and its residual effects.	**VR-3:** Mitigation measures for accidents in the shipping lanes would be Chevron's responsibility only for Chevron-owned vessels. Responsibility for accidents for non-Chevron owned vessels would fall to the vessel operator/owner. Chevron shall implement measures OS-7a and OS-7b in Operational Safety/Risk of Upset.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.	See MM OS-7a and MM OS-7b.

Table 6-8
Mitigation Monitoring Program – Geological Resources/Structural Integrity

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GEO-4: Long Wharf operators may not have adequate warning time to allow a vessel to depart from the Long Wharf to avoid damage to the vessel and/or the Long Wharf from a tsunami. Impacts are considered significant adverse (Class II) impacts.	**GEO-4:** As soon as possible, after notification of a tsunami, Long Wharf operators shall release the vessel from its mooring and the vessel shall move away from the Long Wharf, when the Captain determines that it is safe and feasible to do so.	Chevron shall report to CSLC after a tsunami event.	Reduces damage to Long Wharf and vessels from tsunami events.	CSLC	After a tsunami event.
~~**GEO-6:** A preliminary analysis indicates that the structural capacity of the breasting dolphins and the main Long Wharf would need to be increased, in order to berth/moor larger vessels at Berth No. 4. Significant, adverse impacts (Class II) could occur without proper design and construction of seismic and mooring improvements addressing this potential for larger vessels at Berth No. 4.~~	~~**GEO-6:** Additional mooring and structural analyses will be required and results implemented prior to the berthing of larger double-hulled vessels at Berth No. 4.~~	~~Chevron shall submit evaluations to CSLC for review and approval.~~	~~Assures structural adequacy for the mooring of larger vessels.~~	~~CSLC~~	~~When Berth No. 4 modifications are proposed~~

Table 6-9
Mitigation Monitoring Program – Socioeconomics

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
~~**SOC-1:** Impacts from oil releases could degrade the environment and preclude the use of shoreline land and associated recreational activities. Potential socioeconomic implications would include any area, structure, or facility that could experience business interruption and loss of revenue as a result of a spill and resultant cleanup operations. Impacts could be Class I or II, depending on severity of impact.~~	~~**SOC-1:** Mitigation would be in the form of monetary compensation for losses in accordance with the California Oil Spill Prevention and Response Act.~~	~~As per OSPR, to be commensurate with Chevron's contribution of impacts.~~	~~Helps to recover monetary losses from business interruptions resulting directly or indirectly from oil spill events.~~	~~OSPR~~	~~After a spill occurs.~~

Table 6-10
Mitigation Monitoring Program – Environmental Justice

Impact	Mitigation Measure	Monitoring/ Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
EJ-1: The Long Wharf area of potential impact does not include an area identified as an MTC-Minority Zone and Area of Poverty, or an area of Meaningfully Greater Minority or Low-Income Population. However, preclusion of affected populations from fishing areas over an extended period of time could be considered disproportionate, particularly if such populations do not have the ability to go to uncontaminated areas nearby and depend on fishing as a food source.	**EJ-1:** Should an oil spill from the Long Wharf extend beyond 0.5 mile from the Terminal and preclude ~~sport~~ subsistence fishing by members of minority and/or low income communities for more than two days, Chevron U.S.A., Inc. shall contribute either funds or food stuffs to a local food bank in an amount sufficient, as determined in conjunction with the CSLC, to replace food sources that would have been supplied within the affected areas.	CSLC shall determine the amount of food to be contributed in conjunction with Chevron.	Helps to prevent impacts to low-income populations in the case of oil spills.	CSLC	After a spill occurs.

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