

**CALENDAR ITEM  
C47**

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05/24/12  
PRC 5735.1  
D. Oetzel  
M. Meier  
S. Mongano

**CONSIDER CERTIFICATION OF A FINAL ENVIRONMENTAL IMPACT REPORT  
AND ISSUANCE OF A NEW GENERAL LEASE - INDUSTRIAL USE**

**APPLICANT:**

Shore Terminals LLC  
2368 Maritime Drive, Suite 275  
Elk Grove, CA 95758

**AREA, LAND TYPE, AND LOCATION:**

10.10 acres, more or less, of filled and unfilled sovereign land along the south shore of the Carquinez Strait, located just west of the Carquinez Bridge and the unincorporated town of Crockett in Contra Costa County.

**AUTHORIZED USE:**

The continued operation and maintenance of an 850-foot-long Marine Oil Terminal (MOT) with a single breasting dolphin and two mooring dolphins on either side of the loading platform. The wharf deck consists of a concrete 32-foot by 72-foot loading platform supported by steel pipe piles and is connected to land via a 260-foot elevated trestle paved with a 12-foot-wide access road with a 15-foot-wide pipe rack along the west side of the roadway. The wharf is equipped with pumps, pipelines, electrical utilities, and other mechanical equipment for effectively transferring diverse refined products from vessels with varying configurations.

**LEASE TERM:**

25 years, beginning January 1, 2012.

**CONSIDERATION:**

An annual base rent in the amount of \$168,285; with the State adjusting the annual base rent each year by application of the California Consumer Price Index (CPI); however, the adjusted annual rent will never be lower than the base rent.

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This CPI adjustment will continue until each 10th anniversary of the lease, when a new base rent may be established as outlined in the lease. The CPI adjustment would continue on any new base rent established.

### **SPECIFIC LEASE PROVISIONS:**

**Insurance:** Liability insurance: no less than \$20,000,000 per occurrence; the State may, at any time, require an increase in the amount of liability insurance to reflect economic inflation and to cover any additionally authorized improvements or alterations; Lessee may satisfy all or part of the insurance requirements through maintenance of a staff-approved self-insurance program as set forth in the Lease.

**Performance Deposit:** \$2,000,000. At any time during the term of the Lease, the State may require an increase in the amount of the performance deposit to reflect economic inflation or to cover any additionally authorized improvements, alterations, or other purposes, or any modification of rental.

### **BACKGROUND:**

ShoreTerminals LLC (Shore) is an independent, privately-owned shipper of refined petroleum products. No crude oil is shipped through the marine terminal. Shore operates the MOT and storage facilities in an industrial area in the unincorporated portion of Contra Costa County between the unincorporated towns of Crockett and Rodeo. The MOT is located just east of the ConocoPhillips San Francisco Refinery in the northwestern portion of Contra Costa County. More specifically, it lies just west of the Carquinez (I-80) Bridge and Crockett at the entrance to the Carquinez Strait and across and to the south of the Vallejo ship channel. Approximately one mile southwest of the wharf facility, Shore owns approximately 50 acres on the south side of San Pablo Avenue occupied by the upland storage facilities, which Shore calls the Main Terminal. Pipelines connect the wharf to the Main Terminal and upland storage facilities.

The original lease (PRC 5735.1) was issued to former owner Wickland in 1981 for an initial term of 25 years with a provision for a preferential right of renewal for a lease term not less than 20 years. Wickland assigned its interest to Shore Terminals in September 1998, and Valero L.P. purchased Shore Terminals in July 2005. Valero L.P. was then spun off as an independent company from Valero Energy. Valero L.P. changed its name to NuStar Energy L.P. in 2007. Shore Terminals LLC, a wholly owned subsidiary of NuStar Energy Company, has applied to the California State Lands Commission (CSLC or Commission) for a new 30-year lease.

The current lease has been in holdover since December 21, 2006. A new lease, if granted, would allow Shore to continue current transfer operations of petroleum

## CALENDAR ITEM C47 (CONT'D)

products from the wharf portion of its facility to its upland Main Terminal storage (and from the wharf to ship) for the next 25 years. While in holdover, the terms of the prior lease remained in effect, allowing Commission to adjust the rent on every fifth anniversary or on a subsequent anniversary if the five-year anniversary is missed. On June 23, 2011, the Commission authorized the revision of rent to \$168,285 per year, effective January 1, 2012. If this new lease is authorized, the rent increase authorized by the revision of rent will be incorporated into the new lease terms.

### **ENVIRONMENTAL PROCESS:**

The Notice of Preparation (NOP) for the Environmental Impact Report (EIR) was circulated for a review period on November 28, 2007. The environmental setting existing at the time the NOP is published normally constitutes the baseline physical conditions by which a Lead Agency determines whether an impact is significant (State CEQA Guidelines § 15125 subd.(a)). The EIR analyzed impacts from continued operation of the MOT through December 2036. The NOP was sent to federal, State, and local agencies, environmental and public interest groups, affected landowners, local libraries, newspapers, and other interested parties. On January 10, 2008, a public scoping meeting was held in the city of Martinez to provide an opportunity for the general public to learn about the proposed project and participate in the environmental analysis by providing oral or written comments.

On January 25, 2010, the Commission issued a Notice of Availability (NOA) for the Draft EIR and a Notice of Public Hearing. The Draft EIR was circulated for a 45-day public review with comments accepted by mail, email, facsimile transmission, and in person at the public meetings. On February 17, 2010, the Commission held two public meetings in the city of Martinez. At these meetings, the public, agencies, and interested parties, had the opportunity to ask questions and present oral and/or written testimony on the Draft EIR. No one provided comments at the public meetings. Three written comments were received; two during the public review period, and one after the close of the public review period.

In preparing this Final EIR, the CSLC staff responded to all comments received, obtained additional information as needed to respond to comments, and revised the Draft EIR. The Final EIR was released on January 10, 2012, and the Commission issued a NOA/Notice of Intent to Certify the EIR on the same day.

### **ENVIRONMENTAL ISSUES:**

The Final EIR identifies potentially significant adverse impacts associated with the following environmental issue areas – Operational Safety/Risk of Accidents (OS), Biological Resources (BIO), Commercial and Sport Fisheries (FSH), and Hydrology and Water Quality (HWQ) – that, with the application of all feasible

## CALENDAR ITEM C47 (CONT'D)

mitigation measures, cannot be reduced to less than significant. A Statement of Overriding Considerations (SOC) has been prepared (see Exhibit E). These significant impacts are attributed to the risk of refined petroleum product spills in the marine environment, ballast water discharge and invasive organism/non-indigenous species introduction, water quality degradation, and impacts to commercial and sport fisheries.

1. Impacts Related to Routine Operations and Accidental Spills (OS-1, BIO-3, FSH-1).

Routine operations and accidental spills at the Shore Terminal, or from vessels in transit near the terminal or in vessel transit lanes, could result in a release of refined petroleum product in quantities greater than 50 barrels (bbls) (spills that cannot be contained during first response efforts with rapid cleanup). A large spill could result in significant adverse environmental impacts, and/or residual impacts to operational safety, biological resources, commercial and sport fisheries.

2. Impacts Related to Ballast Water Discharge and Invasive Organism/Non-Indigenous Species Introduction (BIO-1, BIO-2, HWQ-1).

Discharge of ballast water containing harmful organisms 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. California's performance standards for the discharge of ballast water will not be implemented for all vessel types and size classes arriving to California ports until 2016. The existing management strategy – ballast water exchange – is an interim tool that reduces the threat of species introductions, but is not completely effective. Therefore, the discharge of ballast water is determined to have a potentially significant impact to water quality.

The water quality of the San Francisco Bay estuary has been degraded by inputs of pollutants from a variety of sources such as storm water runoff. Use by marine vessels of anti-fouling paints containing copper, sodium, zinc, and tributyltin (TBT) are considered toxic and present a significant adverse impact to water quality. Any contribution of a contaminant already at significantly high levels to the waters of San Francisco Bay would have a significant adverse impact at the cumulative level.

### **OTHER PERTINENT INFORMATION:**

1. Applicant owns the MOT. Applicant has right-of way agreements with CS Lands (Phillips 66) for the pipelines that connect the wharf and the MOT.

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2. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15025), the staff has prepared an EIR identified as CSLC EIR No. 744, State Clearinghouse No. 2007112108. Such EIR was prepared and circulated for public review pursuant to the provisions of CEQA. A Mitigation Monitoring Program has been prepared in conformance with the provisions of CEQA (Pub. Resources Code § 21081.6) and is contained in Exhibit C, attached hereto.
3. Findings made in conformance with the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15091) is contained in Exhibit D, attached hereto.
4. A Statement of Overriding Considerations made in conformance with the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15093) is contained in Exhibit E, attached hereto.
5. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

### **EXHIBITS:**

- A. Land Description
- B. Site and Location Map
- C. Mitigation Monitoring Program
- D. CEQA Findings
- E. Statement of Overriding Considerations

### **RECOMMENDED ACTION:**

It is recommended that the Commission:

### **CEQA FINDINGS:**

1. Certify that an EIR No. 744, State Clearinghouse No. 2007112108, was prepared for this Project pursuant to the provisions of CEQA, that the Commission has reviewed and considered the information contained therein and that the EIR reflects the Commission's independent judgment and analysis.
2. Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached hereto.

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3. Adopt the Findings, made in conformance with California Code of Regulations, title 14, section 15091, as contained in Exhibit D, attached hereto.
4. Adopt the Statement of Overriding Considerations made in conformance with California Code of Regulations, Title 14, section 15093, as contained in Exhibit E, attached hereto.

### **SIGNIFICANT LANDS INVENTORY FINDING:**

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

### **AUTHORIZATION:**

Authorize issuance of a General Lease – Industrial Use to Shore Terminals LLC, beginning January 1, 2012, for a term of 25 years, for the continued operation and maintenance of existing marine oil terminal facilities as described in Exhibit A and shown on Exhibit B (for reference purposes only) and by this reference made a part hereof; base rent of \$168,285 for the period from January 1, 2012 to December 31, 2012; with the State modifying the annual rent by application of a CPI adjustment for each year following the fixing of the base rent as provided in the Lease, provided that the adjusted annual rent will never be lower than the base rent then in effect; liability insurance coverage in the amount of not less than \$20,000,000 per occurrence with the State reserving the right at any time to require an increase in the amount of liability insurance to reflect economic inflation and to cover any additionally authorized improvements or alterations; Lessee may satisfy all or part of the insurance requirements through maintenance of a staff-approved self-insurance program as outlined in the Lease; performance deposit of \$2,000,000 with the State reserving the right at any time during the lease term to require an increase in the amount of the performance deposit to reflect economic inflation or to cover any additionally authorized improvements, alterations, or other purposes, or any modification of rent as provided in the Lease.

**EXHIBIT A**

**PRC 5735.1**

**LAND DESCRIPTION**

A parcel of tide and submerged land in Section 36, T3N, R4W, MDM, and Section 31, T3N, R3W, MDM, Contra Costa County, California, described as follows:

COMMENCING at the southeast corner of said section 36; thence north along the line common to said Sections 36 and 31, a distance of 1310.10 feet to the northeast corner of Tide Land Survey No. 19 and the POINT OF BEGINNING; thence S 68° 09' 30" W 38.46 feet, to a point on the Bulkhead Line as shown on U.S. Engineers map of Harbor Lines for Carquinez Strait, dated March 1, 1940; thence N 79° 00' 00 " W 40 feet; thence N 45° 00' 00" E 425.00 feet; thence N 83° 00' 00" E 800.00 feet; thence S 32° 30' 00" E 575 feet more or less to the mean high tide line of San Pablo Bay; thence westerly along the mean high tide line 590 feet more or less to a point on the north boundary of Tide Land Survey No. 12; thence along said boundary S 59° 09' 30" W 165 feet more or less to an angle point in said boundary; thence continuing along said north boundary N 64° 05' 30" W 314.79 feet; thence N 89° 35' 30" W 313.50 to the true point on beginning.

Record bearings were rotated 1° 09' 30" clockwise.

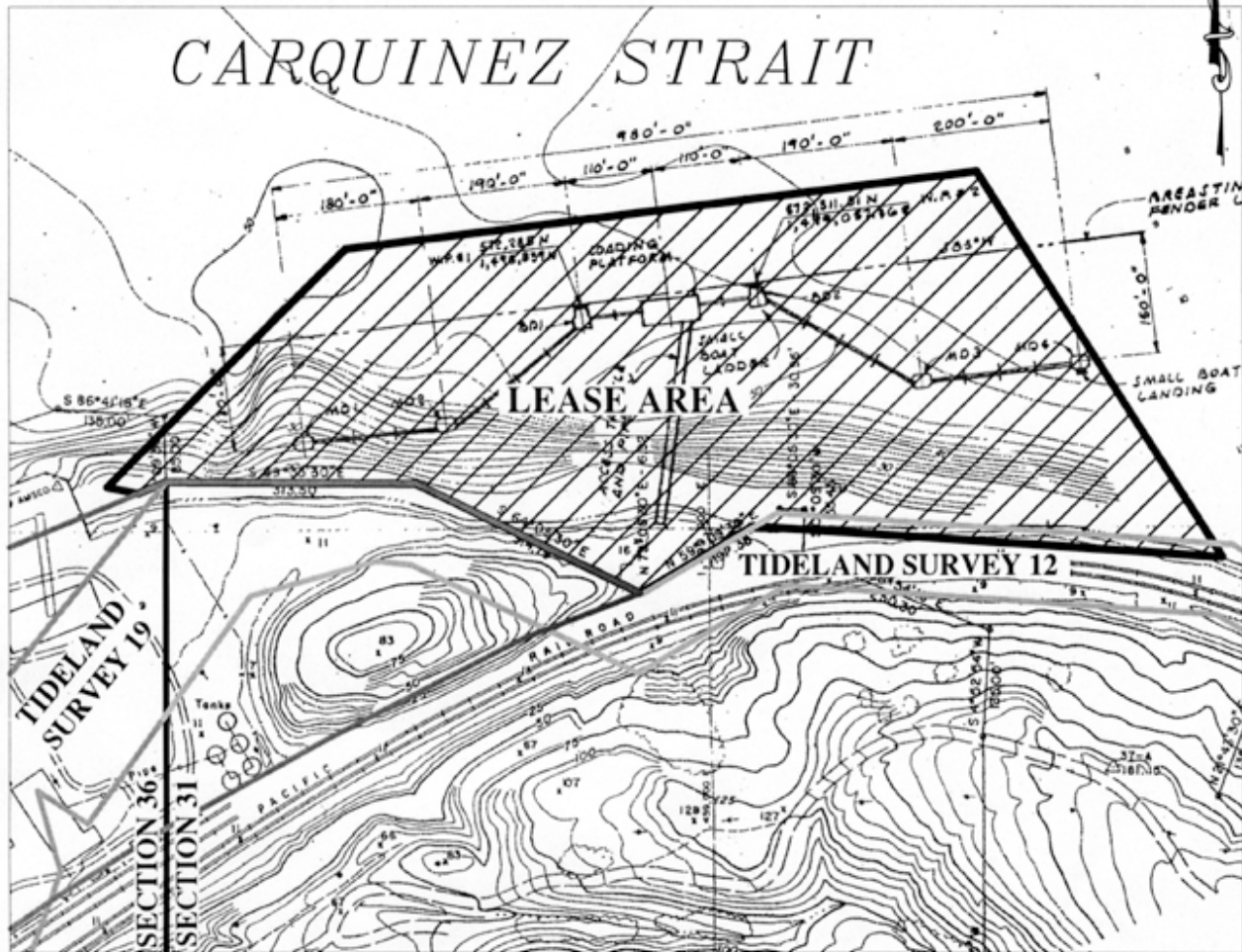
TOGETHER WITH the sovereign interests in Tideland Survey Nos. 12 and 19 abutting the above described parcel.

**END OF DESCRIPTION**

**REVISED NOVEMBER 18, 1988 BY BIU 1.**

NO SCALE

## SITE



CARQUINEZ STRAIT, SELBY

NO SCALE

## LOCATION



MAP SOURCE: USGS QUAD

## **Exhibit B**

PRC 5735  
SHORE TERMINALS LLC  
(A NUSTAR ENERGY COMPANY)  
APN 355-040-002  
GENERAL LEASE -  
INDUSTRIAL USE  
CONTRA COSTA COUNTY



MUF 12/19/11

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.



# **EXHIBIT C – SHORE MARINE OIL TERMINAL LEASE PROJECT**

## **MITIGATION MONITORING PROGRAM**

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### **INTRODUCTION TO MITIGATION MONITORING PROGRAM**

As part of its Project approval, the California State Lands Commission (CSLC) is required to adopt a program for reporting or monitoring the implementation of mitigation measures for the Shore Marine Oil Terminal (MOT) Lease Project (Project) to ensure the adopted mitigation measures are implemented. This Lead Agency responsibility originates in Public Resources Code section 21081.6, subsection (a) (Findings), and the State CEQA Guidelines sections 15091, subsection (d) (Findings) and 15097 (Mitigation Monitoring or Reporting). The Mitigation Monitoring Program (MMP) discussed here was prepared as part of the Shore Marine Oil Terminal Project Final Environmental Impact Report (EIR) (State Clearinghouse No. 2007112108), which was published in January 2012 (the Final EIR is available on the CSLC website at: [www.slc.ca.gov](http://www.slc.ca.gov) [under the “Information” tab and “CEQA Updates” link]).

### **MONITORING AUTHORITY**

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

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

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

The CSLC or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC. Any deviation and its correction shall be reported immediately to the CSLC or its designee by the environmental monitor assigned to the construction site.

## **ENFORCEMENT RESPONSIBILITY**

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

## **MITIGATION COMPLIANCE RESPONSIBILITY**

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

## **GENERAL MONITORING PROCEDURES**

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

**Construction Personnel.** A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures, will be taken:

- Procedures to be followed by construction companies hired to do the work will be written into contracts between the Applicant and any construction contractors. Procedures to be followed by construction crews will be written into a separate

document that all construction personnel will be asked to sign, denoting agreement.

- One or more pre-construction meetings will be held to inform and train construction personnel about the requirements of the monitoring program.
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all mitigation measures requiring their attention.

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

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

## **MITIGATION MONITORING TABLE**

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

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

Mitigation Monitoring Program – Applicant Proposed Measures

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
N/A	<b>APM-1:</b> Powered containment boom reels were installed and became operational in November 2009.	MOT	Verify installation	Contain potential spills	CSLC	2009
N/A	<p><b>APM-2:</b> The seismic assessment reported in the 2010 Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) Initial Audit of the NuStar Selby Marine Terminal identified that two of the four product lines serving the wharf have insufficient flexibility to accommodate the predicted seismic displacements of the wharf moving during an earthquake. To provide the necessary flexibility and prevent the potential for pipeline rupture and oil spill, a U-shaped expansion loop will be introduced into each of these two at-risk product lines. The new expansion loops will consist of 60 feet of new piping, inserted into the alignment of the existing P-4 and P-5 lines. The loops will be installed on the wharf, starting approximately 2 feet from the first set of existing 12-inch pipe elbows. Lateral stops will also be added to the 2nd and 5th pile cap bents (counting from the wharf) to provide necessary lateral restraint for the upgraded system. This work is exclusively intended to address the seismic deficiencies reported in the 2010 MOTEMS Initial Audit. No increase in pipeline capacity or throughput is associated with this work.</p> <p><b>NOTE:</b> This APM is superseded by Mitigation Measures GEO-1a and GEO-1b.</p>	N/A	N/A	N/A	N/A	N/A

## Mitigation Monitoring Program – Operational Safety / Risk of Accidents

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p><b>OS-1:</b> Accidental spills of relatively low-volatility petroleum products or large accidental spills of highly volatile products.</p> <p>Spills of relatively low-volatility petroleum products (e.g., diesel and jet fuel) or large volumes of highly volatile products (e.g., gasoline) could reach the shore, potentially causing injury to members of the public. (Class I, or Class II, depending on the size and complexity of the spill)</p>	<p><b>MM OS-1a. Install Tension-Monitoring Devices.</b> Shore shall install and maintain tension-monitoring devices to monitor all mooring lines and environmental loads and avoid excessive tension or slack conditions that could result in damage to the terminal structure and/or equipment and/or vessel mooring line failures that could result in spills. Line tensions and environmental data shall be integrated, recorded, and relayed to the Control Room system, Terminal operator(s), and vessel operator(s). This system shall include, but not be limited to, quick-release hooks only (with load cells), site-specific anemometer(s), and visual and audible alarms that can support preset limits and shall be able to record and store monitoring data. Shore shall document procedures and training for systems use and communications between the Terminal and vessel operator(s). Routine inspection, testing and maintenance of all equipment and systems in accordance with manufacturer's recommendations and necessity are required to ensure safety and reliability, to the satisfaction of California State Lands Commission (CSLC) staff. This system shall be implemented within two years of certification of this Environmental Impact Report or sooner if required for Marine Oil Terminal Engineering and Maintenance Standards compliance. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.</p>	Marine Oil Terminal (MOT)	Verify installation	Avoid excessive tension or slack conditions that could result in spills	CSLC	Within 2 years of project approval and EIR certification

Mitigation Monitoring Program – Operational Safety / Risk of Accidents

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
OS-1 (continued)	<p><b>MM OS-1b. Install an Allision Avoidance System.</b> Shore shall install and maintain an Allision Avoidance System (AAS) at the Shore Marine Oil Terminal (MOT) to prevent damage to the wharf and/or vessel during docking operations. The AAS shall also be used and alarmed to monitor vessel drift (both surge and sway) during all mooring operations, and shall be equipped with an Automatic Identification System (AIS) receiver to capture passing vessel parameters. This system shall be integrated with the tension-monitoring system such that all data collected are available in the Control Room and to the Operator(s) at all times and to vessel operator(s) during berthing operations, and shall be able to record and store monitoring data. Prior to implementing this measure, Shore shall consult with the San Francisco Bar Pilots, the U.S. Coast Guard, and the staff of the California State Lands Commission (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 MOT. This system shall be implemented within two years of certification of this Environmental Impact Report or sooner if required for Marine Oil Terminal Engineering and Maintenance Standards compliance. Shore shall document procedures and training for systems use and communications between the Terminal and vessel operator(s). Routine inspection, testing, and maintenance of all equipment and systems in accordance with manufacturer's recommendations and necessity are required to ensure safety and reliability, to the satisfaction of CSLC staff. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.</p>	MOT	Verify installation	Prevent damage to the wharf and/or vessel during docking operations	CSLC	Within 2 years of project approval and EIR certification

## Mitigation Monitoring Program – Operational Safety / Risk of Accidents

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
OS-1 (continued)	<b>MM OS-1c. Replace Existing Loading Arms.</b> Shore shall replace the existing loading arms on the Marine Oil Terminal (MOT) with loading arms that have quick-connect/disconnect couplers and emergency quick-release systems, consistent with Marine Oil Terminal Engineering and Maintenance Standards sections 3110F.2, 3110F.2.2.1, 3110F.8 and all other applicable regulations, within two years of certification of this Environmental Impact Report. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by California State Lands Commission (CSLC) staff and only if approved by the CSLC at a publicly noticed meeting.	MOT	Verify loading arm replacement	Limit spill volume in the event of loading arm break-away	CSLC	Within 2 years of project approval and EIR certification
OS-1 (continued)	<b>MM OS-1d. Install Remote Release System.</b> Shore shall install and maintain mooring quick-release devices that shall be able to be activated within 60 seconds. These devices shall be capable of being engaged by electric/push button release mechanism and by integrated remotely operated release system. Shore shall document procedures and training for systems use and communications between Terminal and vessel operator(s). Routine inspection, testing, and maintenance of all equipment and systems in accordance with manufacturer's recommendations and necessity are required to ensure safety and reliability, to the satisfaction of California State Lands Commission (CSLC) staff. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.	Marine Oil Terminal (MOT)	Verify remote release system installation	Limit spill volume in the event of loading arm break-away	CSLC	Within 2 years of project approval and EIR certification

Mitigation Monitoring Program – Operational Safety / Risk of Accidents

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p><b>OS-2:</b> Potential for fires or explosion of gasoline, ethanol, or other blended product vapors during product transfer, or from other sources of ignition in areas where vapor could be present.</p> <p>Potential impacts to public safety could occur from an explosion of gasoline, ethanol, or other blended product vapors due to an inadequately operating vapor control system. (Class II)</p>	<p><b>MM OS-2. Prepare a New Hazard and Operability (HAZOP) Study.</b> Within 90 days of project approval and Environmental Impact Report certification, Shore shall prepare for California State Lands Commission and U.S. Coast Guard approval a new Hazard and Operability (HAZOP) Study for all Shore Marine Oil Terminal (MOT) operations including all sources of vapor and ignition, and identify steps needed to eliminate the identified possible accidents.</p>	MOT	Verify submittal of new HAZOP Study	Reduce likelihood of accidental fires and explosions	CSLC	Within 90 days of project approval and EIR certification



## Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p><b>BIO-1:</b> Potential impacts to biological resources from the introduction of non-indigenous species from vessel biofouling.</p> <p>The release of non-indigenous aquatic organisms attached to or associated with the wetted portions of a vessel or its appurtenances, including, but not limited to, sea chests, propellers, anchors, and associated chains (collectively called vessel biofouling), could impair estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat. (Class I)</p>	<p><b>MM BIO-1. Compliance with the California Marine Invasive Species Act.</b> Beginning as of the date of certification of this Environmental Impact Report's Mitigation Monitoring Program, Shore shall advise owners, operators, and shipping agents representing vessels calling at the Marine Oil Terminal (MOT) about the California Marine Invasive Species Act (MISA) and associated regulations, and shall ensure that the vessel is in compliance with Public Resources Code sections 71204(e) and 71204(f) and California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.8.</p>	All vessels calling at the MOT	Verify documentation of vessel certification	Compliance with MISA to reduce the introduction of non-indigenous species from hull fouling	CSLC	Beginning as of the date of project approval and EIR certification
<p><b>BIO-2:</b> Potential impacts to biological resources from the introduction of non-indigenous species from ballast water.</p> <p>Discharge of ballast water that contains non-indigenous aquatic organisms could impair estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat. (Class I)</p>	<p>Implement <b>MM BIO-1</b></p> <p><b>MM BIO-2. Ballast Water Management.</b> Following the adoption of the Mitigation Monitoring Program for the proposed Project, Shore shall advise both agents and representatives of shipping companies having control over vessels that have informed Shore of plans to call at the Marine Oil Terminal (MOT) about the California Marine Invasive Species Act (MISA) and associated implementing regulations. Shore shall ensure that all vessels submit required reporting forms, as applicable for each vessel, to the California State Lands Commission Marine Facilities Division, including but not limited to, the Ballast Water Reporting Form, the Hull Husbandry Reporting Form, the Ballast Water Treatment Technology Reporting Form, and/or the Ballast Water Treatment Supplemental Reporting Form 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 MOT. Shore shall not discharge any non-segregated ballast water received at the MOT to San Francisco Bay. If Shore needs to unload non-segregated ballast water, it shall be unloaded into a tanker truck or other suitable waste handling vehicle and</p>	All vessels calling at the MOT	Verify completion of required forms	Compliance with MISA to reduce the introduction of non-indigenous species from ballast water discharge	CSLC	Beginning as of the date of project approval and EIR certification

Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	disposed of at an appropriate facility. All vessels calling at the MOT must also have removed biofouling organisms from their wetted surfaces on a regular basis.					
<p><b>BIO-3:</b> Potential impacts to biological resources from the accidental release of petroleum products.</p> <p>The accidental release of refined petroleum products from the Marine Oil Terminal (MOT) has the potential to affect marine biota inhabiting or using Bay-Delta waters as well as all intertidal and subtidal habitats. Especially at risk are marine birds, marine mammals, intertidal and shallow subtidal communities, as well as special-status fish, bird, plant, and marine mammal species. (Class I)</p>	<p><b>MM BIO-3a. Rescue and Rehabilitation.</b> Shore shall ensure that procedures are in place to bring bird rescue and rehabilitators to the site as soon after the accidental release occurred to rescue birds following a release event that is not immediately contained at the Shore terminal. This includes having contractual arrangements in place as part of Shore's Spill Prevention Control and Countermeasure plan so that bird rescue personnel and equipment can be on-site within hours of the onset of an accidental release. Contact info for a bird rescue center (such as the International Bird Rescue Research Center listed below) shall be kept onsite and notified in the event of an accidental release greater than 10 barrels.</p> <p>International Bird Rescue Research Center Northern California San Francisco Oiled Wildlife Care and Education Center 4369 Cordelia Rd. Fairfield, CA 94534 Main line: (707) 207-0380 Fax: (707)207-0395 Wildlife hospital: (707) 207-0380 ext. 110</p>	MOT	Verify contractual arrangements in place and contact info on site	Minimize marine bird mortality in the event of a spill	CSLC	Within 60 days of project approval and EIR certification
	<p><b>MM BIO-3b. Develop Cleanup Procedures.</b> Shore shall develop procedures for the cleanup of any sensitive biological areas contacted by released hydrocarbon products from the operations of the terminal, including transportation within the Bay-Delta, in consultation with biologists from California Department of Fish and Game (CDFG) and the National Marine Fisheries Service (NMFS) to avoid damage from cleanup activities.</p>	MOT	Verify that cleanup procedures have been developed	Minimize impacts to sensitive biological areas in the event of a spill	CSLC, with CDFG and NMFS	Within 60 days of project approval and EIR certification

## Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	<b>MM BIO-3c. Conduct Post-Spill Studies.</b> If Marine Oil Terminal (MOT) related damage occurs to Bay-Delta marine habitats or biological resources, any loss or impact shall be documented as soon as possible after a serious accidental spill or release. Shore's spill response plans shall be updated within six months of the execution of the lease to provide guidance to spill response managers so that qualified resources can be on-site as soon as possible after initial impact to enable post-spill studies to begin immediately.	MOT	Verify updated spill response plans; verify reports of accidental spills	Minimize impacts to sensitive biological areas in the event of a spill	CSLC	Updated spill response plans within 6 months of lease execution; spill documentation within 2 weeks of spill event

Mitigation Monitoring Program – Commercial and Sport Fisheries

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>FSH-1:</b> Impacts to commercial and recreational fishing as a result of accidental releases or spills.  Accidental releases or spills of refined hydrocarbon products shipped through the Shore Marine Oil Terminal can impact the Bay-Delta, open coast ecosystems, and commercial or recreational fisheries. (Class I and II)	Implement <b>MM BIO-3b</b> , and <b>MM BIO-3c</b> .	See Impact <b>BIO-3</b> , above				
	Implement <b>MM OS-1a</b> through <b>MM OS-1d</b> .	See Impact <b>OS-1</b> , above				
	<b>MM FSH-1a. Post Notices at Spill Sites, Marinas, Launch Ramps, and Fishing Sites.</b> In the event of a Marine Oil Terminal or associated vessel spill, Shore shall immediately post notices in English, Vietnamese, Cantonese, and Spanish, in areas most likely to be seen by commercial and recreational sport fishing interests. Notices shall include a contact telephone number and website where the public can obtain additional information on spill response cleanup activities, Bay-Delta area or fisheries closures, fish consumption advisories issued as result of the spill, how to become involved in cleanup activities, and how to document and obtain compensation for financial impacts.	Areas affected by a spill	Verify posting of required notification	Notify public of areas potentially affected by spill	CSLC	Within 24 hours in the event of a spill
	<b>MM FSH-1b. Compensation.</b> If damages to fishing operations or related businesses occur due to a Marine Oil Terminal or associated vessel spill, reasonable compensation shall be provided. Potential losses shall be documented as soon as possible after the spill incident has occurred. Shore's spill response manuals will be updated to provide effective procedures for notifying the public how and where to submit compensation claims, personnel or entities responsible for processing claims, and procedures and deadlines for the timely processing of claims.	Areas affected by a spill	Verify update of spill response manuals to include public notification procedures	Compensate for impacts to fishing operations or related businesses	CSLC	Updated spill response plans within 6 months of lease execution

## Mitigation Monitoring Program – Hydrology and Water Quality

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p><b>HWQ-1:</b> Water quality impacts associated with discharged ballast water.</p> <p>Discharge of ballast water that contains non-native or harmful microorganisms could impair several of the study 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 ballast water is determined to have a potentially significant impact to water quality. (Class I)</p>	Implement <b>MM BIO-2</b> .	See Impact <b>BIO-2</b> , above				
<p><b>HWQ-2:</b> Water quality impacts associated with marine anti-fouling paints.</p> <p>Marine anti-fouling paints that include organotin biocides could have a significant adverse impact to water quality when leached or dislodged from vessels berthing at the Marine Oil Terminal (MOT). (Class II)</p>	<p><b>MM HWQ-2. Documentation Certifying Compliance.</b> Shore shall require representatives of vessels berthing at the Marine Oil Terminal to provide documentation certifying that their vessel is in compliance with the 2001 International Maritime Organization Convention on the Control of Harmful Anti-Fouling Systems on Ships regarding elimination of organotin biocides, and Shore shall 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 at least 24 hours prior to the vessel's arrival at the MOT.</p>	All vessels calling at the MOT	Verify documentation of vessel certification	Eliminate water quality degradation from organotin biocides	CSLC	Prior to each vessel's entry into San Francisco Bay or at least 24 hours prior to the vessel's arrival at the project site

Mitigation Monitoring Program – Land Use and Recreation

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p><b>LUR-1:</b> Impacts on sensitive shoreline lands, and/or water and non-water recreation due to a release of accidental spills of relatively low-volatility petroleum products or large accidental spills of highly volatile products.</p> <p>Spills of relatively low-volatility petroleum products or large volumes of highly volatile products could result in a temporary disturbance to Bay waters used for recreation as well as recreational facilities and designated areas. (Class II)</p>	Implement MM OS-1a through MM OS-1.	See Impact OS-1, above				

Mitigation Monitoring Program – Visual Resources/Light and Glare

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<p><b>VIS-1:</b> Degradation of visual resources due to a release of accidental spills of relatively low-volatility petroleum products or large accidental spills of highly volatile products.</p> <p>A spill of relatively low-volatility petroleum products or a large accidental spill of highly volatile products could adversely alter or degrade the existing visual character or quality of the Marine Oil Terminal lease area and its surroundings, unusually contrast with or degrade the character of the viewshed, and/or temporarily result in a substantial adverse effect on a designated scenic area. (Class II)</p>	Implement MM OS-1a through MM OS-1d.	See Impact OS-1, above				

## Mitigation Monitoring Program – Geology, Soils, and Seismicity

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
<b>GEO-1:</b> Accidental spills of petroleum products from damage to petroleum pipelines due to seismic events.  Spills of petroleum products could occur due to damage to transfer pipelines during a seismic event either at the loading arms or at the shore embankment. (Class II)	<b>MM GEO-1a. Provide Pipeline Flexibility on Transfer Pipelines at the Loading Arms.</b> Within two years after approval of the new lease by the California State Lands Commission (CSLC), Shore shall provide additional flexibility to the loading arm to transfer pipeline connections, based on detailed engineering analysis, by the installation of one or more of the following options:  1. Installation of U-shaped expansion loops at each of the four 12-inch pipelines.  2. Replacement of hard connections to loading arms with a section of flexible reinforced hose to accommodate at least +/- 4.6 inches of movement.  3. Installation of expansion joints in lines to absorb relative axial movement.  Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.	Marine Oil Terminal (MOT)	Verify installation of loading arm flexibility	Limit seismic effects on loading arms	CSLC	Within 2 years of project approval and EIR certification
	<b>MM GEO-1b. Provide Pipeline Flexibility on Transfer Pipelines at the Embankment.</b> Within six months after approval of the new lease by the California State Lands Commission (CSLC), Shore shall complete and submit to the CSLC a detailed engineering analysis to investigate/validate methods for providing improved flexibility for the section of transfer pipelines between the embankment and the block valves to increase settlement capacity to more than 4 inches. Methods to be investigated shall include, but not be limited to, replacement of the soil cover on the section of transfer pipelines between the embankment and the block valves with lightweight geofoam. Shore shall install the preferred technology within one year of approval by CSLC staff.	Marine Oil Terminal (MOT)	Verify installation of transfer pipeline flexibility	Limit seismic effects on transfer pipelines	CSLC	Within 1 year of CSLC approval of preferred technology

# EXHIBIT D – SHORE MARINE OIL TERMINAL LEASE PROJECT

## STATEMENT OF FINDINGS

### INTRODUCTION TO STATEMENT OF FINDINGS

These Findings address the significant environmental impacts identified in the Final Environmental Impact Report (EIR) prepared by the California State Lands Commission (CSLC), as Lead Agency under the California Environmental Quality Act (CEQA), for the Shore Marine Oil Terminal Lease Project (Project) (State Clearinghouse No. 2007112108).<sup>1</sup> The Project involves Shore Terminals LLC (a NuStar Energy Company), hereafter referred to as Shore (aka NuStar or Selby), entering into a new 30-year lease of California sovereign land for the Shore Marine Oil Terminal (MOT), which is located off the south shore of the Carquinez Strait west of the Carquinez Bridge, Contra Costa County. The current lease (PRC 5735.1) expired in 2006, and the CSLC considers the lease to be in holdover (i.e., the MOT is continuing to operate under the terms of its existing lease while a decision on a new lease is pending). A new 30-year lease, if granted, would allow Shore to continue current transfer operations of refined petroleum products from the wharf portion of its facility to its upland Main Terminal storage facility through December, 2036. Since Shore does not ship crude oil through its MOT, crude oil shipments are not part of the Project; Shore also currently has no plans to expand the operations or equipment on the wharf. Shore's upland Main Terminal operations are separate from wharf operations, and are not part of the proposed lease.

The CSLC is making these Findings pursuant to the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15091, subd. (a)), which states in part:

*No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale of each finding.*

All significant environmental impacts of the proposed Project identified in the EIR are identified below; the significance of each impact is classified as follows.

Class	Definition	Findings Required
I	Significant adverse impact that remains significant after mitigation	Yes
II	Significant adverse impact that can be eliminated or reduced below an issue's significance criteria	Yes
III	Adverse impact that does not meet or exceed an issue's significance criteria	No
IV	Beneficial impact	No

<sup>1</sup> The Final EIR was published in January 2012 and is available on the CSLC website at: [www.slc.ca.gov](http://www.slc.ca.gov) (under the "Information" tab and "CEQA Updates" link).



These Findings are:

1. Organized by significant impacts within the following EIR issue areas:
  - Operational Safety/Risk of Accidents [OS];
  - Biological Resources [BIO];
  - Commercial and Sport Fisheries (FSH);
  - Hydrology and Water Quality [HWQ];
  - Land Use and Recreation [LUR];
  - Visual Resources/Light and Glare [VIS]; and
  - Geology, Soils, and Seismicity [GEO].
2. Numbered in accordance with the impact and mitigation numbers identified in the Mitigation Monitoring Program (MMP) in the EIR (see Section 7.0 of the EIR) (Findings may not be numbered sequentially, since impacts that are less than significant before mitigation [Class III] or beneficial impacts [Class IV] do not require Findings); and
3. Followed by a discussion of the facts supporting the Findings.

Pursuant to State CEQA Guidelines section 15091, subdivision (a), a Finding has been made for each significant impact (i.e., Class I or II) as to one or more of the following, as appropriate.

- (1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.
- (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.

A discussion of supporting facts follows each Finding. Whenever Finding (1) occurs, the mitigation measures identified to lessen the significant environmental impact are identified in the facts supporting the Finding.

Whenever Finding (2) occurs, the agencies with jurisdiction are specified. These agencies, within their respective spheres of influence, have the responsibility to adopt, implement, and enforce the mitigation discussed within each type of impact that could result from project implementation. However, under CEQA (Pub. Resources Code, § 21081.6), the CSLC, as the CEQA Lead Agency, has the responsibility to ensure that the mitigation measures are effectively implemented.

Other specified State, local, regional, and Federal public agencies include, but are not necessarily limited to the following:

- Bay Area Air Quality Management District (BAAQMD);
- California Department of Fish and Game (CDFG), Office of Spill Prevention and Response (OSPR);
- Contra Costa County Public Works Department;
- San Francisco Bay Conservation and Development Commission (BCDC);
- San Francisco Bay Regional Water Quality Control Board (SFBRWQCB);
- State Fire Marshal;
- U.S. Army Corps of Engineers (ACOE); and
- U.S. Coast Guard (USCG).

Wherever Finding (3) is made, the CSLC has determined that sufficient mitigation is not practicable to reduce the impact to a less than significant level and, even after implementation of all feasible mitigation measures, there will or could be an unavoidable significant adverse impact due to the Project. Class I impacts requiring Finding (3) are identified in the EIR and below. The Statement of Overriding Considerations (Exhibit E) applies to all such unavoidable impacts as required by State CEQA Guidelines sections 15092 and 15093.

## EIR FINDINGS

These Findings are based on the information contained in the EIR for the Project, as well as information provided by the Applicant and gathered through the public involvement process, all of which is contained in the administrative record. References cited in these Findings can be found in the EIR, Section 9.0, References. The administrative record is located in the Sacramento office of the California State Lands Commission, 100 Howe Avenue, Suite 100-South, Sacramento, CA 95825.

### CEQA FINDING NO. OS-1

Class: I & II

Impact No.:	<b>OS-1: Accidental Spills of Relatively Low-Volatility Petroleum Products or Large Accidental Spills of Highly Volatile Products.</b> Spills of relatively low-volatility petroleum products (e.g., diesel and jet fuel) or large volumes of highly volatile products (e.g., gasoline) could reach the shore, potentially causing injury to members of the public.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.  (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.

## FACTS SUPPORTING THE FINDING

Shore currently transfers refined petroleum products, but no crude oil, between marine vessels (tankers and barges), which dock at the wharf portion of its facility, and its upland Main Terminal storage facility. Over the past 10 years, an average of 104 marine vessels visited the MOT each year, with a maximum of 137 calls in 2003. Per CSLC, CDFG OSPR, and USCG requirements, Shore is required to maintain an up-to-date Oil Spill Prevention and Response Plan and to have the necessary resources onsite to handle spills of 50 barrels (2,100 gallons) or less. Should a spill of more than 50 barrels occur, Shore is required to take steps to minimize impacts with their onsite equipment, and contact the contracted Oil Spill Response Organization (OSRO) for the MOT, National Response Corporation (NRC). NRC can be onsite within 2 hours and has the capability of recovering approximately 54,000 barrels (2,268,000 gallons) per day.

As for site conditions, the Shore MOT is located in a high-velocity-current area in the Carquinez Strait. In addition, the wharf is not aligned with either the ebb or flood current, which increases the force on moored vessels, causing them to drift in and out from the berth when other vessels are passing. Pursuant to the CSLC's Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS), which are codified in the California Building Code, Chapter 31F – Marine Oil Terminals (Cal. Code Regs., tit. 21, § 3101F et seq.), the Shore MOT is subject to “unfavorable” site conditions in accordance with MOTEMS section 3103F.6.7.

These site conditions could have contributed to an incident that occurred at the MOT in 1997, when the marine tanker *Overseas Philadelphia* rapidly pulled away from the MOT following the progressive breaking of nearly all of the 18 mooring lines. The loading arm connections failed and the loading arms were ripped from the wharf and were the source of a spill. Although the valves on the loading arms were open, no active transfer operation was in progress at the time of the incident. Through the quick actions of the Terminal operator, who saw the incident and manually closed the valves, the spill was limited to the standing contents of the loading arm (about 10 barrels [420 gallons]). In 1996, the year before the *Overseas Philadelphia* incident, two near misses occurred where vessels moored at the MOT drifted between 6 to 12 feet from the wharf, putting strain on the loading arms but not causing any oil to spill.

The possible effects of a major oil spill in San Francisco Bay can be illustrated by a spill involving the container ship *Cosco Busan* that occurred in 2007. (Note: this information is provided as an example; the *Cosco Busan* did not depart from the Shore MOT.)

- On November 7, 2007, the *Cosco Busan* struck the San Francisco-Oakland Bay Bridge as it attempted to depart San Francisco Bay. The accident created a gash in the hull of the vessel, causing it to spill approximately 1,275 barrels (53,569 gallons) of fuel oil into the Bay, according to USCG calculations.
- Wind and currents took some of the oil outside of the Bay, where it impacted the outer coast from approximately Half Moon Bay to Point Reyes. Inside the Bay, the oil primarily impacted waters and shoreline within the central portion of the Bay, from Tiburon to San Francisco on the west side and from Richmond to

Alameda on the east side. The USCG officially declared the cleanup response to be complete on November 9, 2008, just over 1 year after the spill. Some clean-up continued at several beaches (e.g., Rodeo Beach, Albany Beach) into summer 2008, as buried or sunken oil was uncovered and/or washed up on the beaches by wave action.

- It was estimated that the *Cosco Busan* spill killed 6,849 birds, impacted 14 to 29 percent of the herring spawn in the winter of 2007, oiled 3,367 acres of shoreline habitat, and resulted in the loss of over 1 million recreational user-days.
- For restoration of damages caused by the *Cosco Busan* spill, a legal settlement determined that \$32.3 million will be spent on a variety of projects. About \$5 million is set aside for bird restoration, \$4 million for habitat restoration, \$2.5 million for fish and habitat (eelgrass) restoration, and \$18.8 million for recreational use improvements. An additional \$2 million will fund restoration planning, administration and oversight, with any unused funds to be spent toward more restoration.

The probability that a release would occur at the Shore MOT is derived from statistics of the historical record of past spills. Published information on spills of 238 barrels (9,996 gallons) or greater in the San Francisco Bay Area from 1978 to 1988 indicate that the probability of a spill of this magnitude at MOTs was about  $2.7 \times 10^{-4}$  per vessel call. Using this statistic, the probability of a spill at the Shore MOT has been estimated based on the number of port calls at the MOT. Assuming that the highest number of calls (i.e., 137) would occur in the future, the expected mean time between spills of about 238 barrels would be approximately 27 years at the Shore MOT.

For spills greater than 1,000 barrels (42,000 gallons), statistics are used for worldwide tanker visits, and the increased safety record of the San Francisco Bay Area is factored into those statistics. Based on these assumptions, the probability was estimated to be  $3.8 \times 10^{-5}$  per port call. Using this probability and applying the highest number of annual visits to the MOT in the past 10 years (137), the expected mean time between spills greater than 1,000 barrels would be approximately 190 years.

Three spills have occurred at the MOT in the past 15 years, each of which were 10 barrels (420 gallons) or less; these spills were contained and cleaned up with Shore's onsite equipment.

Shore's conformance with its existing Oil Spill Prevention and Response Plan, which requires that the MOT have the necessary resources to handle spills of 50 barrels (2,100 gallons) or less, together with implementation of mitigation measures (MMs) OS-1a through OS-1d, described below, would reduce these potentially significant impacts to less than significant (Class II) for a small spill of 50 barrels or less. However, even though the probability of a moderate spill of 238 barrels (9,996 gallons) is low (once over the 30-year term of the lease), and the probability for a larger spill is even lower, spill modeling results show that such events could pose a threat to human health through interaction with the spilled material, which would be a significant impact even with the implementation of MMs OS-1a through OS-1d (Class I).

Mitigation Measures for OS-1: The following shall be completed by Shore within 24 months of lease implementation,<sup>2</sup> unless otherwise specified.

**OS-1a Install Tension-Monitoring Devices.** Shore shall install and maintain tension-monitoring devices to monitor all mooring lines and environmental loads and avoid excessive tension or slack conditions that could result in damage to the terminal structure and/or equipment and/or vessel mooring line failures that could result in spills. Line tensions and environmental data shall be integrated, recorded, and relayed to the Control Room system, Terminal operator(s), and vessel operator(s). This system shall include, but not be limited to, quick-release hooks only (with load cells), site-specific anemometer(s), and visual and audible alarms that can support preset limits and shall be able to record and store monitoring data. Shore shall document procedures and training for systems use and communications between the Terminal and vessel operator(s). Routine inspection, testing and maintenance of all equipment and systems in accordance with manufacturer's recommendations and necessity are required to ensure safety and reliability, to the satisfaction of CSLC staff. This system shall be implemented within two years of certification of this EIR or sooner if required for MOTEMS compliance. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.

**OS-1b Install an Allision Avoidance System.** Shore shall install and maintain an Allision Avoidance System (AAS) at the MOT to prevent damage to the wharf and/or vessel during docking operations. The AAS shall also be used and alarmed to monitor vessel drift (both surge and sway) during all mooring operations, and shall be equipped with an Automatic Identification System (AIS) receiver to capture passing vessel parameters. This system shall be integrated with the tension-monitoring system such that all data collected are available in the Control Room and to the Operator(s) at all times and to vessel operator(s) during berthing operations, and shall be able to record and store monitoring data. Prior to implementing this measure, Shore shall consult with the San Francisco Bar Pilots, the USCG, 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 MOT. This system shall be implemented within two years of certification of this EIR or sooner if required for MOTEMS compliance. Shore shall document procedures and training for systems use and communications between the Terminal and vessel operator(s). Routine inspection, testing, and maintenance of all equipment and systems in accordance with manufacturer's recommendations and necessity are required

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<sup>2</sup> The following terms used in these Findings—(1) “within 24 months of lease implementation” and (2) “within two years of certification of this EIR—are defined as on or before May 23, 2014 (two years after the May 24, 2012, Commission hearing on the EIR and Project).

to ensure safety and reliability, to the satisfaction of CSLC staff. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.

**OS-1c Replace Existing Loading Arms.** Shore shall replace the existing loading arms on the Shore MOT with loading arms that have quick-connect/disconnect couplers and emergency quick-release systems, consistent with MOTEMS sections 3110F.2, 3110F.2.2.1, 3110F.8 and all other applicable regulations, within two years of certification of this Environmental Impact Report. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.

**OS-1d Install Remote Release System.** Shore shall install and maintain mooring quick-release devices that shall be able to be activated within 60 seconds. These devices shall be capable of being engaged by electric/push button release mechanism and by integrated remotely operated release system. Shore shall document procedures and training for systems use and communications between Terminal and vessel operator(s). Routine inspection, testing, and maintenance of all equipment and systems in accordance with manufacturer's recommendations and necessity are required to ensure safety and reliability, to the satisfaction of CSLC staff. Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.

## **RATIONALE FOR MITIGATION**

MM OS-1a. The Shore MOT is located in a high-velocity-current area in the Carquinez Strait. Its wharf is not aligned with either the ebb or flood current, and it currently has no mechanisms to monitor mooring line tending and integrated environmental conditions. Monitoring moored vessel line strains and environmental conditions enables informed and controlled transfer operations to continue in high-velocity-current conditions, harsh weather conditions, and/or other conditions where excessive tension or slack in a vessel's mooring lines could result in failure of the mooring lines and/or significant movement of the vessel resulting in damage to the MOT and/or vessel.

Tension-monitoring devices able to continuously monitor moored vessel line strains and to alarm at preset limits can warn operators of the development of dangerous mooring situations; this allows time to take corrective action and minimize the potential for the parting of mooring lines, which can quickly escalate to the breaking of loading arm connections, the breakaway of a vessel, and/or other unsafe mooring conditions that could ultimately lead to a petroleum product spill. Backed up by an alarm system, real time data monitoring and control room information would provide the Terminal Person-

In-Charge (TPIC)<sup>3</sup> with immediate knowledge of whether safe operating limits of the moorings are being exceeded. Mooring adjustments can be made to reduce the risk of damage and accidental conditions.

MM OS-1b. Located in a high-velocity-current area, the MOT is subject to “unfavorable” site conditions in accordance with the MOTEMS section 3103F.6.7. However, Shore’s current practice is to only berth vessels in “favorable” conditions. At present, the docking system relies on the pilot’s judgment to determine the vessel’s approach speed and angle. AASs would monitor an approaching vessel’s speed, approach angle, and distance from the dock to keep the potential impact velocity within the maximum elastic allowable limits of the fender/structural system, and thus help to prevent damage to the MOT and/or vessel due to vessel impact that could lead to a spill. Monitoring these factors would ensure that all vessels can safely berth at the Terminal and comply with the minimum standards required in the MOTEMS.

Furthermore, monitoring passing vessels and moored vessel movements with AASs ensures that all vessels can remain securely moored at the Terminal and comply with the minimum standards required in the MOTEMS. Excessive surge or sway of vessels (motion parallel or perpendicular to the wharf, respectively) and/or passing vessel forces may result in sudden shifts/redistribution of mooring forces through the mooring lines, which can quickly escalate to the failure of mooring lines, breaking of loading arm connections, the breakaway of a vessel, and/or other unsafe mooring conditions that could ultimately lead to a spill.

MM OS-1c. During the 1997 *Overseas Philadelphia* incident at the Shore MOT, the loading arm connection failed and was the source of a spill. Fortunately, although the valves on the loading arms were open, no active transfer operation was in progress at the time of the incident. Through the quick actions of the Terminal operator, who saw the incident and manually closed the valves, the spill was limited to the standing contents of the loading arm (about 10 barrels [420 gallons]). However, had that Terminal operator not taken immediate action, or had active transfer operation been in progress at the time of the incident, the spill would have been much larger.

Quick-connect/disconnect couplers and emergency quick-release systems for near instantaneous disconnect of the loading arms from the vessel would reduce the amount of a spill to less than 1 gallon with or without human intervention.

MM OS-1d. The MOT 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, tsunami, explosion or other emergency, quick release of the mooring lines within 60 seconds would allow the vessel to quickly leave the Shore MOT which could help prevent damage to the MOT and vessel and avoid and/or minimize spills. These measures may also help isolate an emergency situation, such as a fire or explosion, from spreading between the MOT and vessel, thereby reducing spill potential. By providing mooring release devices

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<sup>3</sup> The TPIC supervises all ship docking and cargo transfer operations and is required to be on duty during marine transfer operations as stated in Shore’s Selby Wharf Operations Manual. The TPIC is also responsible for reporting emergencies and oil spills.

capable of being engaged by a locally initiated electric/push button release system and by a remotely operated release mechanism, Shore would have several different options to cover emergency situations.

The *Overseas Philadelphia* incident in 1997 may have potentially been caused by or partially caused by a combination of high-velocity currents at the MOT, weak mooring lines, and the potential wake effects from a passing vessel (CSLC staff post-incident investigations were indeterminate as to one single factor causing this incident and pointed to a combination of these three factors). The MOT is not aligned with either the ebb or flood current, which increases the force on moored vessels, causing them to drift in and out from the berth when vessels are passing. In addition, the wharf is located in the Carquinez Strait and is subject to high-velocity currents, increasing the probability of this type of event. If the MOT had had a tension-monitoring system, an AAS, and quick-connect/disconnect couplers on the loading arm at the time of the incident, operators would potentially have had advanced notice of the strain on the mooring lines and been alarmed to take (and capable of taking) action as the vessel began to move away from the MOT. As noted above, two other incidents occurred in 1996 where vessels moored at the Shore MOT drifted between 6 to 12 feet from the wharf, putting strain on the loading arms, but did not break away or spill any petroleum product. The systems proposed in MM OS-1a, OS-1b, and OS-1c would provide critical information and capabilities to the TPIC that would help identify and facilitate timely response to conditions similar to those that led to the *Overseas Philadelphia* incident, thereby reducing the likelihood of spills into the Bay during loading or unloading operations.

The combination of these mitigation measures would lower the probability that a spill would occur and would reduce the consequence of an oil spill if it occurs to less than significant for spills of 50 barrels (2,100 gallons) or less (Class II). However, the impacts associated with the consequences of spills greater than 50 barrels would remain significant (Class I). Approval of the Project would be subject to a Statement of Overriding Considerations.

**Summary:** Impacts associated with spills greater than 50 barrels remain significant and unavoidable following application of all feasible mitigation. Impacts associated with spills less than 50 barrels would be reduced to less than significant

#### CEQA FINDING NO. OS-2

Class: II

Impact No.:	<b>OS-2: Potential for Fires or Explosion of Gasoline, Ethanol, or Other Blended Product Vapors During Product Transfer, or From Other Sources of Ignition in Areas Where Vapor Could Be Present.</b> Potential impacts to public safety could occur from an explosion of gasoline, ethanol, or other blended product vapors due to an inadequately operating vapor control system.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.



## FACTS SUPPORTING THE FINDING

An evaluation of Shore's Hazard and Operability (HAZOP) Study of Terminal Operations and system drawings contained in Shore's Wharf Operations Manual was conducted as part of the review of the proposed Project. In summary, the evaluation indicates that the HAZOP is inadequate for the proposed new lease going forward. It is likely that some of the MOT equipment related to safety may have been replaced since the HAZOP was prepared about 30 years ago. Additionally, because of its age, the equipment that has not been replaced may need to be evaluated further. The evaluation also noted that several of the drawings contained in the Wharf Operations Manual are incomplete and do not show sufficient details of the system to effectively evaluate the HAZOP that was previously carried out. Therefore, it is recommended that a new HAZOP Study be prepared to ensure that the MOT can operate safely going forward with a new lease for the next 30 years, and to ensure that adequate safety measures are in place to prevent significant impacts from occurring. This new HAZOP should identify all sources of vapor including but not limited to the Vapor Control System. It should also identify all sources of ignition in areas where vapor could be present. The prevention of vapor being ignited by heat, electric static sparks, and other sources would reduce the exposure to risks but not eliminate it completely. The new HAZOP should also make recommendations on improvements that should be made to ensure continuing safety.

### Mitigation Measures for Impact OS-2:

**OS-2 Prepare a New Hazard and Operability (HAZOP) Study.** Within 90 days of project approval and EIR certification, Shore shall prepare for CSLC and USCG approval a new HAZOP Study for all Shore MOT operations including all sources of vapor and ignition, and identify steps needed to eliminate the identified possible accidents.

## RATIONALE FOR MITIGATION

Conducting a HAZOP study will determine if safety systems are working properly and safe operations procedures are followed during routine operations; any deficiencies will be corrected by the operator with CSLC Marine Facilities Division (MFD) staff oversight. The HAZOP study must be completed on or before August 22, 2012 (within 90 days after the May 24, 2012, Commission hearing on the EIR and Project).

**Summary:** Implementation of the mitigation measures would reduce the impact to less than significant.

### CEQA FINDING NO. BIO-1

Class: I
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Impact No.:	<b>BIO-1: Potential Impacts to Biological Resources from the Introduction of Non-indigenous Species from Vessel Biofouling.</b> The release of non-indigenous aquatic organisms attached to or associated with the wetted portions of a vessel or its appurtenances, including, but not limited to, sea chests, propellers, anchors, and associated chains (collectively called vessel biofouling), could impair
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	estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat.
Finding(s):	<p>(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.</p> <p>(3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.</p>

## FACTS SUPPORTING THE FINDING

The introduction of non-native species into the Bay-Delta ecosystems can result in drastic, large-scale changes to the aquatic community. Approximately 100 species of non-native marine invertebrates have been introduced into San Francisco Bay over the past 130 years. The principal mechanisms of introduction have been biofouling, boring, and release of ballast-dwelling organisms. Introduced species include snails, shrimp, plankton, and crabs. The introduction of Asian clams (*Corbula amurensis* and *Corbicula fluminea*) has resulted in significant changes in native benthic infaunal communities in the western Delta and Sacramento and San Joaquin Rivers. The species *Corbula amurensis* consumes plankton voraciously, which has altered natural phytoplankton cycles and species in the western Delta and is one of the suspected causes of fish population declines in key Delta species such as Delta and longfin smelt. Its presence has also been attributed to the reduction of northern anchovy populations in the western Delta.

The potential introduction of non-native species from vessel biofouling exists. The best control for introducing non-native species from vessel biofouling is to minimize vessel biofouling through regular ship maintenance, use of anti-fouling paints, frequent hull inspections, and overall ship maintenance. Despite vessel operators' best efforts, the potential for the introduction of non-native species from vessel biofouling still exists and the introduction of a single species would be considered a significant impact.

### Mitigation Measures for Impact BIO-1:

**BIO-1 Compliance with the California Marine Invasive Species Act.** Beginning as of the date of certification of this Environmental Impact Report's MMP, Shore shall advise owners, operators, and shipping agents representing vessels calling at the MOT about the California Marine Invasive Species Act and associated regulations, and shall ensure that the vessel is in compliance with Public Resources Code sections 71204(e) and 71204(f) and California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.8.

## RATIONALE FOR MITIGATION

Implementation of an effective anti-fouling program, including use of anti-fouling hull coatings, regular vessel inspections, and additional cleaning of vessel surfaces that

have limited anti-fouling coating, are critical to the prevention of non-native species introduction to the Bay-Delta. Strict compliance by vessels using the MOT will significantly reduce the potential for the introduction of non-native species to Bay-Delta waters. However, the possibility of introduction of non-native species from vessel biofouling still remains even with strict adherence to State regulations and permits. Approval of the Project would be subject to a Statement of Overriding Considerations. The advisories will begin on May 24, 2012 (the date of the Commission hearing on the EIR and Project).

**Summary:** Impacts would remain significant (Class I) even with implementation of the recommended mitigation measures.

**CEQA FINDING NO. BIO-2**
**Class: I**

Impact No.:	<b>BIO-2: Potential Impacts to Biological Resources from the Introduction of Non-indigenous Species from Ballast Water.</b> Discharge of ballast water that contains non-indigenous aquatic organisms could impair estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.  (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.

**FACTS SUPPORTING THE FINDING**

As provided under BIO-1 above, the introduction of non-native species into the Bay-Delta ecosystems can result in drastic, large-scale changes to the aquatic community. The potential introduction of non-native species from ballast water exists. The best control for introducing non-native species from ballast water adherence to Article 4.7 Performance Standards for the Discharge of Ballast Water for Vessels Operating in California Waters and strict compliance with the Marine Invasive Species Act (MISA) (Pub. Resources Code, §§ 71200-71271) and associated regulations, including California's performance standards for the discharge of ballast waters. Despite vessel operators' best efforts, the potential for the introduction of non-native species from ballast water still exists and the introduction of a single species would be considered a significant impact

Mitigation Measures for Impact BIO-2: Shore has indicated that it does not receive non-segregated ballast water at the MOT, so the handling of non-segregated ballast water at the MOT is unlikely. Regardless, mitigation measures are still required to address such an event should it occur. In addition to the mitigation measure presented below, implementation of MM BIO-1 would also reduce impacts to biological resources from the introduction of non-indigenous species from ballast water.

**BIO-2 Ballast Water Management.** Following the adoption of the MMP for the proposed Project, Shore shall advise both agents and representatives of shipping companies having control over vessels that have informed Shore of plans to call at the MOT about the California Marine Invasive Species Act and associated implementing regulations. Shore shall ensure that all vessels submit required reporting forms, as applicable for each vessel, to the CSLC Marine Facilities Division, including but not limited to, the Ballast Water Reporting Form, the Hull Husbandry Reporting Form, the Ballast Water Treatment Technology Reporting Form, and/or the Ballast Water Treatment Supplemental Reporting Form 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 MOT. Shore shall not discharge any non-segregated ballast water received at the MOT to San Francisco Bay. If Shore 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. All vessels calling at the MOT must also have removed biofouling organisms from their wetted surfaces on a regular basis.

## RATIONALE FOR MITIGATION

This measure provides a tracking mechanism to monitor the management of ballast water in California waters and to track the implementation of Article 4.7 Performance Standards for the Discharge of Ballast Water for Vessels Operating in California Waters. Strict compliance with the MISA (Pub. Resources Code, §§ 71200-71271) and associated regulations, including California's performance standards for the discharge of ballast waters, by vessels using the MOT will significantly reduce the potential for the introduction of non-native species to Bay-Delta waters. However, the possibility of introduction of non-native species from ballast water discharge still remains even with strict adherence to State regulations and permits. Approval of the Project would be subject to a Statement of Overriding Considerations.

**Summary:** Even with the implementation of the recommended mitigation measure and MM BIO-1, impacts would remain significant (Class I).

### CEQA FINDING NO. BIO-3

Class: I

Impact No.:	<b>BIO-3: Potential Impacts to Biological Resources from the Accidental Release of Petroleum Products.</b> The accidental release of refined petroleum products from the MOT has the potential to affect marine biota inhabiting or using Bay-Delta waters as well as all intertidal and subtidal habitats. Especially at risk are marine birds, marine mammals, intertidal and shallow subtidal communities, as well as special-status fish, bird, plant, and marine mammal species.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR. (3) Specific economic, legal, social, technological or other considerations,

	including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.
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## FACTS SUPPORTING THE FINDING

The accidental release of refined product from either the MOT or from product in-transit to or from the Terminal has the potential to have a significant impact on the Bay-Delta, open coast ecosystems, and their flora and fauna. The severity of the impact is dependent on not only the material spilled and its toxicity to marine biota, but the volume of material released, the location of the release, the time of year the spill occurs, and the effectiveness of spill response and cleanup activities.

The average most probable (i.e., 50 barrels [2,100 gallons]) and maximum most probable (i.e., 434 barrels [18,228 gallons]) spills for the products shipped through the MOT were modeled. The projected trajectories indicate that the most probable areas of the Bay-Delta to be impacted by these releases would be the shoreline and open water areas immediately adjacent to the Project site and immediately across the Carquinez Strait. Daily tidal flow would be expected to potentially spread the releases slightly east and west of the Project site. The Bay-Delta habitats that predominate in this region consist of open water, sand and gravel beaches, shallow subtidal flats, artificial shore armoring, riprap, docks, and piers. The taxa most at risk include diving and wading birds and intertidal communities.

Because petroleum floats on water and expands to form slicks that move in accordance with the tide and wind, shoreline habitats would be impacted by most small spills and by all large spills within estuarine and most coastal environments. Acute effects on a wide variety of intertidal organisms are common in petroleum spills where substantial slicks form on shorelines. Soft-bodied invertebrates (e.g., polychaete worms, starfish, crabs, anemones, bryozoans, hydroids, and tunicates) are very vulnerable to direct contact; small crustaceans, such as amphipods, are particularly susceptible. Barnacles and mussels, because they can close up and not pump water or feed for a substantial number of hours, can resist short-term toxic effects better than most organisms. However, other invertebrates and intertidal fish can be killed within hours if there is a substantial quantity of spilled chemical in the intertidal zone.

The intersection of surface petroleum slicks with seabirds, marine ducks, neustons (organisms that float on the top of water or live right under the surface), and intertidal communities may generate a greater threat than dissolved hydrocarbons. Birds depend on the insulating properties of their feathers to maintain body temperatures, and direct contact with petroleum can compress plumage and compromise insulation. While attempting to clean their feathers, birds will ingest hydrocarbons, resulting in gastrointestinal upsets, dehydration, and starvation. In addition, their ability to fly can also be affected if feathers become too matted with petroleum, as might occur with diesel. Large numbers of sea birds have succumbed to spills along the Pacific Coast in the past, including spills in San Francisco Bay, apparently due to compromised feathers and loss of insulation.

Compared to crude oil and bunker fuel (petroleum products that for the most part remain as slicks on top of the water), diesel, gasoline, and other refined products that are shipped through the Shore MOT dissolve more in water, disperse more quickly, and evaporate faster. However, gasoline's high content of benzene and aromatic compounds (i.e., BTEX) make it more acutely toxic than crude oil on a concentration basis. The effects of a small spill of gasoline in the aquatic environment would be limited both spatially and temporally, due to the shorter exposure period. Diesel has more polycyclic aromatic hydrocarbons (PAH), which cause it to evaporate slower, persist longer in slicks, and present longer exposures to organisms. Diesel, especially diesel mixtures with high aromatic contents, is one of the most toxic petroleum hydrocarbon mixtures or products in the environment.

Reduction of petroleum hydrocarbons in water is due to the combined effects of evaporation, dilution, degradation due to the effects of sunlight, and microbial degradation. The toxicity of the water phase rapidly diminishes in the wake of a spill as these processes occur. The main exception to this generality is if petroleum becomes stranded in a sponge-like shoreline, e.g., with intertidal, thick vegetative material. In this situation, without any cleanup actions taken, petroleum can slowly be released into the immediate area, resulting in potentially harmful water concentrations in confined regions.

A past oil spill into tidal marshlands provide some insight into the effects of hydrocarbons on marsh habitat and associated biota. In April 1988, 400,000 gallons of crude oil leaked from a storage tank at the Shell Refinery in Martinez, California, into McNabney Marsh. The leaked oil flowed into the marsh to a depth of about 4 inches and then into the Carquinez Strait, where it was subsequently carried west into San Pablo Bay and east into Suisun Bay, on successive tides. Both the oil and the cleanup operations that ensued caused extensive damage to the marsh. Without immediate cleanup, the oil would have remained in relatively high concentrations within the tidal marsh for years. Recovery of a marsh ecosystem is a long-term process typically requiring years for small spills and decades for larger spills as a result of the massive death of the marsh vegetation itself, which is the foundation of the ecosystem.

Mitigation Measures for Impact BIO-3: In addition to the Biological Resources mitigation measures presented below, implementation of Mitigation Measures OS-1a through OS-1d would reduce impacts to biological resources.

**BIO-3a Rescue and Rehabilitation.** Shore shall ensure that procedures are in place to bring bird rescue and rehabilitators to the site as soon after the accidental release occurred to rescue birds following a release event that is not immediately contained at the Shore terminal. This includes having contractual arrangements in place as part of Shore's Spill Prevention Control and Countermeasure plan so that bird rescue personnel and equipment can be on-site within hours of the onset of an accidental release. Contact info for a bird rescue center (such as the International Bird Rescue Research Center listed below) shall be kept onsite and notified in the event of an accidental release greater than 10 barrels.

International Bird Rescue Research Center  
Northern California  
San Francisco Oiled Wildlife Care and Education Center  
4369 Cordelia Rd.  
Fairfield, CA 94534  
Main line: (707) 207-0380  
Fax: (707)207-0395  
Wildlife hospital: (707) 207-0380 ext. 110

**BIO-3b Develop Cleanup Procedures.** Shore shall develop procedures for the cleanup of any sensitive biological areas contacted by released hydrocarbon products from the operations of the terminal, including transportation within the Bay-Delta, in consultation with biologists from CDFG and the National Marine Fisheries Service to avoid damage from cleanup activities.

**BIO-3c Conduct Post-Spill Studies.** If MOT related damage occurs to Bay-Delta marine habitats or biological resources, any loss or impact shall be documented as soon as possible after a serious accidental spill or release. Shore's spill response plans shall be updated within six months of the execution of the lease to provide guidance to spill response managers so that qualified resources can be on-site as soon as possible after initial impact to enable post-spill studies to begin immediately.

## **RATIONALE FOR MITIGATION**

MM BIO-3a would increase immediate spill response capability and promote potentially critical actions that would be within Shore's on-site capability to implement and execute to reduce potential spill effects to Bay-Delta ecosystems. As identified in the MMP, MM BIO-3b must be completed on or before July 23, 2012 (within 60 days after the May 24, 2012, Commission hearing on the EIR and Project). This MM would ensure that effective consultation occurs with CDFG and NMFS to prevent damage to sensitive or potentially at-risk Bay-Delta habitats and associated biota, including special-status species, during cleanup activities. MM BIO-3c would ensure that Shore would take the necessary steps in developing effective spill response planning so that qualified scientific personnel could be placed on-site in a timely manner to effectively document spill impacts, recovery, and ultimately the need or justification for compensation to private or governmental entities. Both MMs BIO-3b and BIO-3c would provide for the meaningful collection of information for the continued evaluation of the effectiveness of impact prevention, cleanup actions, and appropriate methods of cleanup and data collection.

Large spills originating from tanker or barge incidents while in transit to the MOT would impact important and sensitive habitats with the San Francisco Bay-Delta, including critical fisheries habitat and protected species. Approval of the Project would be subject to a Statement of Overriding Considerations. The updates to Shore's spill response plans must be completed on or before November 24, 2012 (within six months after the May 24, 2012, Commission hearing on the EIR and Project).

**Summary.** Impacts would remain significant (Class I) even with implementation of the recommended mitigation measures.

**CEQA FINDING NO. FSH-1****Class: I & II**

Impact No.:	<b>FSH-1: Impacts to Commercial and Recreational Fishing as a Result of Accidental Releases or Spills.</b> Accidental releases or spills of refined hydrocarbon products shipped through the MOT can impact the Bay-Delta, open coast ecosystems, and commercial or recreational fisheries.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR. (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.

**FACTS SUPPORTING THE FINDING**

The accidental release of refined product from either the MOT or from product in-transit to or from the Shore Terminal has the potential to have a significant impact on the Bay-Delta, open coast ecosystems, and commercial or recreational fisheries. The severity of the impact is dependent on not only the material spilled and its toxicity to marine biota, but the volume of material released, the location of the release, the time of year the spill occurs, and the effectiveness of spill response and cleanup activities.

Although no active commercial fisheries occur in the immediate vicinity of the MOT, in eastern San Pablo Bay, the area is important foraging and migration habitat for fish and invertebrate taxa that have either commercial or sport fishing importance, including Chinook salmon, sturgeon, Dungeness crab, California Bay shrimp, striped bass, Pacific herring, northern anchovy, and Pacific sardines.

The actual qualitative and quantitative effects, both direct and indirect, of an accidental release on either commercial or sport fishing in the Bay-Delta and open coast regions can be very localized for small spills or widespread for larger spills. Small spills might result in the temporary closure of harbors and marinas and/or short-term displacement or halting of fishing, while cleanup activities are underway. Larger spills could result in delays or closures of fishing seasons, as occurred in 2007 following the *Cosco Busan* spill when the Dungeness crab season opening offshore Central California was delayed. Bivalve mariculture operations in Drakes Bay could also be affected, as illustrated in the Trajectory Analysis Planner spill trajectories modeled for a 20,000-barrel (840,000-gallon) diesel spill at or near the Golden Gate Bridge. Effects on bivalve mariculture could range from temporary restrictions on selling shellfish, to substantial mortality in cultured bivalves.

Small (i.e., less than 50 barrels [2,100 gallons]) and moderate (i.e., less than 434 barrels [18,228 gallons]) spills from the Shore Terminal are expected to have limited



effect on fish taxa of commercial or recreational sport importance. The principal impacts are anticipated to be restricted access to portions of the Bay-Delta during cleanup activities and possible temporary closures of marinas. In the event that released spill material is allowed to enter any of the marinas near the MOT, then the use of those boats for recreational fishing might be further restricted while they are cleaned.

Larger tanker or barge source releases have the potential to impact larger regions of the Bay-Delta. The two modeled scenarios indicate that most of Central Bay and part of the open coast adjacent to the Golden Gate Bridge could be affected. Eelgrass (*Zostera* spp.) beds in Central Bay and the southern portion of North Bay are critical habitat for Pacific herring spawning, as are other submerged vegetation, pier pilings, etc. in this area of the Bay-Delta, which would all be significantly impacted. Pacific herring, anchovy, and Bay shrimp trawling also occur in Central Bay and North Bay, which would be affected by a major tanker or barge spill of refined product.

In summary, small and moderate spills of refined product at or near the MOT would be expected to have limited short-term impact to commercial and recreational fisheries, mostly involving restricted access and use of Bay-Delta waters or boats (Class II). A major tanker or barge spill would be anticipated to have a significant impact on Bay-Delta commercial and recreational sport fishing, including limited access to Bay-Delta or open coast waters, use of boats and equipment, reduced or closed fishing seasons, reduced standing stocks of important fish and invertebrate populations, and potential loss of critical habitat (Class I).

Mitigation Measures for Impact FSH-1: In addition to the mitigation measures presented below, implementation of Mitigation Measures BIO-3b, BIO-3c, and OS-1a through OS-1d would reduce impacts to commercial and sport fisheries.

**FSH-1a Post Notices at Spill Sites, Marinas, Launch Ramps, and Fishing Sites.**

In the event of a MOT or associated vessel spill, Shore shall immediately post notices in English, Vietnamese, Cantonese, and Spanish, in areas most likely to be seen by commercial and recreational sport fishing interests. Notices shall include a contact telephone number and website where the public can obtain additional information on spill response cleanup activities, Bay-Delta area or fisheries closures, fish consumption advisories issued as result of the spill, how to become involved in cleanup activities, and how to document and obtain compensation for financial impacts.

**FSH-1b Compensation.** If damages to fishing operations or related businesses occur due to a MOT or associated vessel spill, reasonable compensation shall be provided. Potential losses shall be documented as soon as possible after the spill incident has occurred. Shore's spill response manuals will be updated to provide effective procedures for notifying the public how and where to submit compensation claims, personnel or entities responsible for processing claims, and procedures and deadlines for the timely processing of claims.

## RATIONALE FOR MITIGATION

MMs BIO-3b, BIO-3c, and OS-1a through OS-1d collectively reduce the potential for small, moderate, and major spills of refined products transported through the MOT and thereby reduce the potential impact to Bay-Delta commercial and recreational sport fishing. MM FSH-1a and MM FSH-1b provide for better notification and communication with commercial and recreational sport fishermen about the areas of the Bay-Delta that may be closed, potential impact of the spill on fish and invertebrate fish species of commercial or recreational fishing importance, how to become involved in cleanup activities, and if financially affected by the spill, how to obtain timely compensation. Approval of the Project would be subject to a Statement of Overriding Considerations.

**Summary:** Impacts following small and moderate spills of refined product at or near the MOT would be mitigated to less than significant (Class II). Impacts following a major tanker or barge spill would be significant and unavoidable (Class I).

### CEQA FINDING NO. HWQ-1

<u>Class: I</u>
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Impact No.:	<b>HWQ-1: Water Quality Impacts Associated with Discharged Ballast Water.</b> Discharge of ballast water that contains non-native or harmful microorganisms could impair several of the study 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 ballast water is determined to have a potentially significant impact to water quality.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.  (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR.

## FACTS SUPPORTING THE FINDING

Ballast water is used to provide stability to vessels, including tankers and barges. Ballast water is taken to compensate for the lightening of vessels bringing products to the MOT. Ballast water from ballast tanks may be discharged from vessels to San Francisco Bay as vessels transfer product to and from the MOT. Non-native or harmful organisms in ballast water may have significant adverse impacts to biological resources and water quality. Release of ballast water could have a significant adverse impact to water quality if viruses, toxic algae, or other harmful microorganisms are released. Release of harmful microorganisms would violate the water quality objective for toxicity in the Basin Plan. This objective states that waters be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.

The MISA prohibits vessels from discharging ballast water into State waters unless the vessel has carried out appropriate ballast water exchange procedure, or is using an environmentally sound alternative shipboard treatment technology approved by the CSLC. Every ship entering State waters is required to submit a Ballast Water Reporting Form, including the coordinates of the location where ballast exchange takes place.

Ballast water exchange is considered an interim measure to reduce the introduction of non-native species until California's performance standards for the discharge of ballast water are fully implemented. While ballast water exchange reduces the introduction of non-native organisms, it is not completely effective. Therefore, discharge of ballast water is determined to have a potentially significant impact to water quality.

Mitigation Measures for Impact HWQ-1: Implement MM BIO-2.

## RATIONALE FOR MITIGATION

MM BIO-2 provides a tracking mechanism to monitor the management of ballast water in California waters and to track the implementation of Article 4.7 Performance Standards for the Discharge of Ballast Water for Vessels Operating in California Waters. Strict compliance with the MISA and associated regulations, including California's performance standards for the discharge of ballast waters, by vessels using the MOT will significantly reduce the potential for the introduction of non-native species to Bay-Delta waters. However, the possibility of introduction of non-native species from ballast water discharge still remains even with strict adherence to state regulations and permits. Approval of the Project would be subject to a Statement of Overriding Considerations.

**Summary:** Even with the implementation of MM BIO-1 and MM HWQ-2 (below), impacts would remain significant (Class I). Until a feasible system to kill all non-native or harmful organisms in ballast water is developed, the discharge of ballast water to San Francisco Bay will remain a significant adverse impact (Class I).

### CEQA FINDING NO. HWQ-2

Class: II

Impact No.:	<b>HWQ-2: Water Quality Impacts Associated with Marine Anti-Fouling Paints.</b> Marine anti-fouling paints that include organotin biocides could have a significant adverse impact to water quality when leached or dislodged from vessels berthing at the MOT.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.

## FACTS SUPPORTING THE FINDING

Marine anti-fouling paints have been commonly used to reduce nuisance algal and biofouling on ships. These paints include high concentrations of biocides that contain copper, sodium, and zinc, among others, all of which are toxic to marine life that may settle on or attach to the wetted surfaces of ships. Use of these paints is essential under

the MISA to reduce introduction of invasive species through vessel biofouling. Vessels berthing at the MOT routinely use anti-fouling paints and would continue to do so in the future with the proposed Project, in compliance with MISA and related regulations.

The International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS Convention) was approved by the International Maritime Organization (IMO) in 2001 and entered into force on September 17, 2008. The AFS Convention banned the application of tin biocides as anti-fouling agents on ships by January 1, 2003, and prohibited the presence of tin biocides or required a protective barrier from them after January 1, 2008. Adherence to this resolution would minimize local water quality impacts to less-than-significant levels. Implementation of MM HWQ-2 would ensure that berthing vessels comply with the AFS Convention.

Mitigation Measures for Impact HWQ-2: In addition to MM HWQ-2 (below), implementation of MM BIO-1 would ensure that implementation of an effective anti-fouling program, including use of anti-fouling hull coatings, regular hull inspections, and additional cleaning of hull surfaces that have limited anti-fouling coating, is carried out.

**HWQ-2 Documentation Certifying Compliance.** Shore shall require representatives of vessels berthing at the MOT to provide documentation certifying that their vessel is in compliance with the 2001 International Maritime Organization Convention on the Control of Harmful Anti-Fouling Systems on Ships regarding elimination of organotin biocides, and Shore shall provide a copy of such certification to the CSLC'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 at least 24 hours prior to the vessel's arrival at the MOT.

## RATIONALE FOR MITIGATION

This mitigation measure would ensure that Shore complies with an IMO AFS Convention for the elimination of organotin biocides.

**Summary:** Implementation of MMs HWQ-2 and BIO-1, would minimize local water quality impacts and would reduce the impact to less than significant.

### CEQA FINDING NO. LUR-1

Class: II

Impact No.:	<p><b>LUR-1: Impacts on Sensitive Shoreline Lands, and/or Water and Non Water Recreation Due to a Release of Accidental Spills of Relatively Low-Volatility Petroleum Products or Large Accidental Spills of Highly Volatile Products.</b></p> <p>Spills of relatively low-volatility petroleum products or large volumes of highly volatile products could result in a temporary disturbance to Bay waters used for recreation as well as recreational facilities and designated areas.</p>
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Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.
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## FACTS SUPPORTING THE FINDING

Release of relatively low-volatility petroleum products or large volumes of highly volatile products could disturb both sensitive shoreline lands and/or water and non-water recreation to the degree that the shoreline and recreational activity areas would be rendered temporarily unusable. The degree of disturbance would be determined by a multitude of factors, including spill size and location, the type of material spilled, prevailing winds and weather conditions, the sensitivity and vulnerability of the resource, response capability to the spill, and other factors.

The primary water-based recreational uses near the MOT are boating, fishing, and water sports such as swimming, surfing, or wind-surfing. Onshore recreation near the MOT consists of waterfront designated parks along the southeast portion of San Pablo Bay and along the Carquinez Strait. A spill of relatively low-volatility petroleum products or large volumes of highly volatile products near the MOT would have the potential to temporarily disrupt recreational uses under numerous circumstances, such as:

- if areas in the water and/or on shore are temporarily closed for cleanup efforts and/or public safety purposes;
- if the presence of spilled product contaminates the water making it unsafe to swim; if the presence of spilled product discourages boaters from taking vessels out due to risk of damage to the boat;
- if the presence of the spill deters recreational users from visiting shoreline parks and beaches due to the presence of spilled product and/or its odor;
- if fisheries must be closed due to human health risk; and/or
- if the presence of spilled product damages marine vessels and/or marinas.

Because the proposed Project includes the potential for a petroleum spill which could result in the presence of petroleum products remaining after cleanup efforts, the impact to recreational resources is potentially significant. However, given the spill prevention measures and response capabilities currently in place, residual impacts on recreation remaining after first response efforts would be temporary and of short duration. As a result, implementation of mitigation measures MM OS-1a through MM OS-1d would reduce potentially significant recreation impacts to less than significant (Class II).

Mitigation Measures for Impact LUR-1: Implement MM OS-1a through MM OS-1d.

## RATIONALE FOR MITIGATION

Combined with existing operational procedures and controls, these mitigation measures would help protect shorelines and recreational resources through improved spill prevention capabilities, and facilitating safe and efficient transit of vessel traffic in the

Bay. By reducing the likelihood that a spill would occur, reducing the quantity of spilled product, and ensuring a timely and comprehensive cleanup of spills, implementation of these measures would ensure that the potential impacts resulting from a spill are temporary and do not persist for an extended duration.

**Summary:** The mitigation measures reduce the likelihood that substantial residual petroleum products would remain after a cleanup, thereby reducing the impact to shoreline and on-water recreational resources from spills to less than significant.

**CEQA FINDING NO. VIS-1****Class: II**

Impact No.:	<b>VIS-1: Degradation of Visual Resources Due to a Release of Accidental Spills of Relatively Low-Volatility Petroleum Products or Large Accidental Spills of Highly Volatile Products</b> A spill of relatively low-volatility petroleum products or a large accidental spill of highly volatile products could adversely alter or degrade the existing visual character or quality of the MOT lease area and its surroundings, unusually contrast with or degrade the character of the viewshed, and/or temporarily result in a substantial adverse effect on a designated scenic area. (Class II)
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.

**FACTS SUPPORTING THE FINDING**

In general, impacts resulting from a petroleum product spill would have the potential to temporarily adversely alter or degrade the visual quality of Bay waters and the affected shoreline. The degree of impact would be determined by a multitude of factors, such as spill size, location, type of material spilled, wind conditions, currents, the vulnerability of the shoreline, and the effectiveness of early containment and cleanup efforts.

The presence of petroleum products in the water and on the shore has the potential to create various adverse visual impacts. The MOT serves as a transfer point for gasoline, diesel, JP-5, JP-8, ethanol, and some gasoline blendstocks. Primary visual impacts resulting from a spill of these products may include, but are not limited to: a sheen of fuel on the water; dead birds and other wildlife; dead marine plants along the shore; and spill cleanup crews and equipment, such as booms. In addition, any spill has the potential to create a negative impression of the Project site and/or viewshed. Once aware of the spill, the public would react negatively to the visual effects of the spill. If public sensitivity becomes high and if the spill cannot be contained by immediate booming and cleanup, the visual effects of even a small spill could be significant.

A spill at or near the MOT would potentially be visible to the public from areas that include, but are not limited to: the Carquinez Strait, Carquinez Bridge, San Pablo and Suisun Bays near the Carquinez Strait, portions of the Bay Trail, the Selby Property, Lone Tree Point, Mare Island, Carquinez Strait Regional Shoreline, Martinez Regional Shoreline, and the Benicia State Recreation Area. Also impacted could be the Vallejo

Municipal Marina, Vallejo Yacht Club, Glen Cove Marina, Benicia Marina and Yacht Club, Napa Valley Yacht Club, Napa Valley Marina, Crockett Marine Service, Martinez Marina, McAvoy Yacht Harbor, Pittsburg Marina, Antioch Marina, and local fishing piers. Several of these locations are within Contra Costa County's "Scenic Waterway System."

For a spill at or near the Richmond-San Rafael Bridge, affected public areas may include, but may not be limited to: the Carquinez Strait, San Pablo Bay near the Carquinez Strait, the upper and middle portions of San Francisco Bay, and the Golden Gate Strait. Affected recreational areas may include: Lone Tree Point, Mare Island, the Carquinez Strait Regional Shoreline, the Benicia State Recreation Area, Marin Islands National Wildlife Refuge and State Ecological Reserve, Corte Madera Marsh and Ecological Reserve, Albany Mudflats Ecological Reserve, Mount Tamalpais Waterfowl Refuge, Emeryville Crescent Wildlife Area, Alcatraz, Angel Island, Baker Beach, Caesar Chavez Park, China Camp State Park, Crissy Field, East Shore State Park, Emeryville Crescent Wildlife Area, Fort Mason, Fort Point, Gateway Shoreline Park, Golden Gate National Recreation Area, Keil Cove-Bluff Point Park (proposed), Lincoln Park, Middle Harbor Shoreline Park, Miller/Knox Regional Shoreline, Ocean Beach, Point Isabel Regional Shoreline, Point Pinole Regional Shoreline Park, Robert W. Crown Memorial State Beach, and Yerba Buena Island. In addition, 34 marina facilities around the Bay may also be impacted by a spill at or near the San Rafael-Richmond Bridge, as well as numerous fishing piers. Several of these locations are within the viewshed of scenic vista points, including the Golden Gate Bridge and the Presidio.

For a spill at or near the Golden Gate Bridge, affected public areas may include, but not be limited to: the upper and middle portions of San Francisco Bay, the Golden Gate Strait, and the coast outside of the Golden Gate Bridge. Affected designated reserves may include: Albany Mudflats Ecological Reserve, Emeryville Crescent Wildlife Area, Mount Tamalpais Waterfowl Refuge, and Corte Madera March Ecological Reserve. Affected recreational areas may include: Point Pinole Regional Shoreline Park, Miller/Knox Regional Shoreline, Point Isabel Regional Shoreline, Caesar Chavez Park, East Shore State Park, Gateway Shoreline Park, Middle Harbor Shoreline Park, Robert W. Crown Memorial State Beach, Baker Beach, Alcatraz, Angel Island, Crissy Field, Fort Mason, Fort Point, Golden Gate National Recreation Area, Keil Cove-Bluff Point Park (proposed), Lincoln Park, Ocean Beach, Yerba Buena Island, Mt. Tamalpais State Park, Stinson Beach Federal Park, Muir Beach, Mussel Rock Park, and local fishing piers. In addition, 29 marina facilities throughout the Bay may be impacted by a spill at or near the Golden Gate Bridge. Like above, several of these locations are within the viewshed of scenic vista points around the San Francisco Bay.

Mitigation Measures for Impact VIS-1: Implement MM OS-1a through MM OS-1d.

## **RATIONALE FOR MITIGATION**

Combined with existing operational procedures and controls, these mitigation measures would help protect visual resources through improved spill prevention capabilities, and facilitating the safe and efficient transit of vessel traffic in the Bay. By reducing the likelihood that a spill would occur, reducing the quantity of spilled product, and ensuring

a timely and comprehensive cleanup of spills, implementation of these measures would ensure that the potential impacts resulting from a spill are temporary and do not persist for an extended duration.

**Summary:** The mitigation measures reduce the likelihood that substantial residual petroleum products would remain after a cleanup, thereby reducing the impact to visual resources from spills to less than significant (Class II).

**CEQA FINDING NO. GEO-1****Class: II**

Impact No.:	<b>GEO-1: Accidental Spills of Petroleum Products from Damage to Petroleum Pipelines due to Seismic Events</b> Spills of petroleum products could occur due to damage to transfer pipelines during a seismic event either at the loading arms or at the shore embankment. (Class II)
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the EIR.

**FACTS SUPPORTING THE FINDING**

The original EIR for the Shore MOT, prepared in 1979, indicated that the proposed steel pipe pile foundations for the Shore wharf were expected to encounter bedrock at shallow depths. The 1979 EIR also indicated that the piles would have to be anchored in sandstone rock. It is reasonable to assume, therefore, that the pile foundations bear on non-compressible formational materials (i.e., bedrock), as this would have been typical geotechnical design requirements at the time the piles were installed. Accordingly, significant settlement of the wharf's foundations under static conditions is not expected. Consequently, the potential for damage to the pipelines on the wharf and onshore due to failure of the wharf's structural foundation from static settlement is considered low. However, assessing the potential for pipeline damage from dynamic factors, including differential displacements or deformation or damage to the piles from seismic events, requires pipeline stress analyses and detailed seismic study. These analyses were conducted, and risks to the pipelines assessed, during the MOTEMS Initial Audit.

The MOTEMS Initial Audit indicated that two areas of potential failure exist: (1) at the pipe connections to the loading arms on the wharf and (2) at the point where the pipelines enter the shore embankment. Should either of these pipeline failures occur during product transfer at the wharf, a significant amount of petroleum product could be released into the environment. Although block valves are currently present onshore to limit pipeline flow in the unlikely event of the failure of the wharf's steel pipe pile foundations, and Shore has proposed a measure to provide more flexibility on two of the four principal transfer pipelines (see Section 2.3.7, Measures Designed Into Proposed Project to Avoid Potential Impacts, of the EIR), the potential for a spill from any of these pipelines due to seismic conditions still requires additional mitigation measures (Class II).



Mitigation Measures for Impact GEO-1:

**GEO-1a Provide Pipeline Flexibility on Transfer Pipelines at the Loading Arms.**

Within two years after approval of the new lease by the CSLC, Shore shall provide additional flexibility to the loading arm to transfer pipeline connections, based on detailed engineering analysis, by the installation of one or more of the following options:

- Installation of U-shaped expansion loops at each of the four 12-inch pipelines.
- Replacement of hard connections to loading arms with a section of flexible reinforced hose to accommodate at least +/- 4.6 inches of movement.
- Installation of expansion joints in lines to absorb relative axial movement.

Shore may install alternate technology that provides an equivalent level of protection, as reviewed by CSLC staff and only if approved by the CSLC at a publicly noticed meeting.

**GEO-1b Provide Pipeline Flexibility on Transfer Pipelines at the Embankment.**

Within six months after approval of the new lease by the CSLC, Shore shall complete and submit to the CSLC a detailed engineering analysis to investigate/validate methods for providing improved flexibility for the section of transfer pipelines between the embankment and the block valves to increase settlement capacity to more than 4 inches. Methods to be investigated shall include, but not be limited to, replacement of the soil cover on the section of transfer pipelines between the embankment and the block valves with lightweight geofoam. Shore shall install the preferred technology within one year of approval by CSLC staff.

**RATIONALE FOR MITIGATION**

These mitigation measures would ensure that the transfer pipeline flexibility would be sufficient to accommodate seismic motions and reduce the likelihood of transfer pipeline failure. The measures must be implemented on or before November 24, 2012 (within six months after the May 24, 2012, Commission hearing on the EIR and Project).

**Summary:** Implementation of the mitigation measures would reduce the impact to less than significant.

## **EXHIBIT E – SHORE MARINE OIL TERMINAL LEASE PROJECT STATEMENT OF OVERRIDING CONSIDERATIONS**

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### **INTRODUCTION TO STATEMENT OF OVERRIDING CONSIDERATIONS**

The Final Environmental Impact Report (EIR) prepared by the California State Lands Commission (CSLC) as Lead Agency under the California Environmental Quality Act (CEQA) for the Shore Marine Oil Terminal Lease Project (Project) (State Clearinghouse No. 2007112108) identifies significant impacts of the proposed Project that cannot feasibly be mitigated to below a level of significance.<sup>1</sup> Pursuant to section 15043 of the State CEQA Guidelines, the CSLC may approve a project even though it would cause a significant effect on the environment, if the CSLC makes a fully informed and publicly disclosed decision that there is no feasible way to lessen or avoid the significant effect, and specifically identified expected benefits from the project outweigh the policy of reducing or avoiding significant environmental impacts of the project.

State CEQA Guidelines section 15093 states in part:

- (a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."
- (b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

Based on the analysis conducted in preparation of this Final EIR, information provided by the Applicant (Shore Terminals LLC [Shore]), information obtained through the public review process, and other information in the administrative record, this Statement of Overriding Considerations presents a list of (1) the specific significant effects on the environment attributable to the Project that cannot feasibly be mitigated to below a level of significance, (2) benefits derived from the proposed Project, and (3) specific reasons for approving the Project.

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<sup>1</sup> The Final EIR was published in January 2012 and is available on the CSLC website at: [www.slc.ca.gov](http://www.slc.ca.gov) (under the "Information" tab and "CEQA Updates" link).

## LEAD AGENCY ADOPTION OF STATEMENT OF OVERRIDING CONSIDERATIONS

The CLSC has balanced the benefits of this Project against significant unavoidable impacts that would remain after mitigation is applied. The CSLC adopts this Statement of Overriding Considerations with respect to the impacts identified in the EIR that cannot be reduced, with mitigation stipulated in the EIR, to a less than significant level.

Although the Applicant has designed the Project to minimize environmental effects, and the CSLC has imposed additional mitigation measures to further reduce impacts, impacts remain that are considered significant after application of all feasible mitigation. Project-related significant impacts are within the following environmental issue areas analyzed in the EIR:

- Operational Safety/Risk of Accidents [OS];
- Biological Resources [BIO];
- Commercial and Sport Fisheries (FSH); and
- Hydrology and Water Quality [HWQ];

As shown in Table 1, these significant impacts fall into two categories:

- Oil Spills; and
- Ballast Water/Vessel Biofouling.

**Table 1. List of Significant Impacts Identified for the Proposed Project**

Impact	Impact Summary	Impact Description
<b>OIL SPILLS</b>		
<b>OS-1</b>	Accidental spills of relatively low-volatility petroleum products or large accidental spills of highly volatile products.	Accidental releases or spills of relatively low-volatility petroleum products (e.g., diesel and jet fuel) or large volumes of highly volatile products (e.g., gasoline or diesel) from the Shore MOT could reach the shore, potentially causing injury to members of the public.
<b>BIO-3</b>	Potential impacts to biological resources from the accidental release of petroleum products.	Accidental releases or spills of refined petroleum products from the Shore MOT has the potential to affect marine biota inhabiting or using Bay-Delta waters as well as all intertidal and subtidal habitats. Especially at risk are marine birds, intertidal and shallow subtidal communities, as well as special-status fish, bird, plant, and marine mammals.
<b>FSH-1</b>	Impacts to commercial and sport fishing as a result of accidental releases or spills.	Accidental releases or spills of refined petroleum products shipped through the Shore MOT can impact the Bay-Delta, open coast ecosystems, and commercial or recreational fisheries.

**Table 1. List of Significant Impacts Identified for the Proposed Project (continued)**

<b>Impact</b>	<b>Impact Summary</b>	<b>Impact Description</b>
<b>BALLAST WATER/VESSEL BIOFOULING</b>		
<b>BIO-1</b>	Potential impacts to biological resources from the introduction of non-indigenous species from vessel biofouling.	The release of non-indigenous aquatic organisms attached to or associated with the wetted portions of a vessel or its appurtenances, including, but not limited to, sea chests, propellers, anchors, and associated chains (collectively called vessel biofouling), could impair estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat.
<b>BIO-2</b>	Potential impacts to biological resources from the introduction of non-indigenous species from ballast water.	Discharge of ballast water that contains non-indigenous aquatic organisms could impair estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, and wildlife habitat.
<b>HWQ-1</b>	Water quality impacts associated with discharged ballast water.	Discharge of ballast water that contains non-native or harmful microorganisms could impair several of the study 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 ballast water is determined to have a potentially significant impact to water quality.

### **Mitigation Measures and Alternatives**

The CSLC finds that all mitigation measures identified in the EIR have been imposed to avoid or lessen impacts to the maximum extent feasible.<sup>2</sup> The CSLC further finds that alternatives analyzed in the EIR, the No Project Alternative and the Limitations on Terminal Use Alternative, are infeasible for the following reasons.

- The No Project Alternative would require the decommissioning and abandonment of the existing Shore Marine Oil Terminal (MOT) and the development of an alternative means of petroleum product transport. Additional CEQA review and approval by the CSLC and other agencies would be required. While the No Project Alternative would eliminate impacts from the Shore MOT, it would shift similar levels of impact to other Bay Area MOTs that would make up the differential for product transport in the area.
- The Limitations on Terminal Use Alternative would result in lower risk of an accidental spill of petroleum products at the Shore MOT, and therefore less risk of collateral impacts to operational safety, hydrology and water quality, biological resources, commercial and sport fisheries, recreation, and visual resources in the

<sup>2</sup> Impacts and mitigation measures are identified and discussed throughout Section 4.0 of the EIR. A summary of all impacts and mitigation measures is provided in the Mitigation Monitoring Program (MMP), adopted as part of this Project approval, as set forth in Exhibit C.

immediate vicinity of the proposed Project. However, that risk would merely be displaced to other terminals in the region since the regional demand for the petroleum products transferred at the Shore MOT is expected to continue. The potential environmental effects of the Limitations on Terminal Use Alternative may be greater than for the proposed Project.

The CSLC finds that the alternatives:

- 1) only partially offset significant impacts;
- 2) potentially transfer environmental impacts to other marine terminal locations in the region;
- 3) have additional significant on-land impacts;
- 4) do not provide beneficial impacts;
- 5) do not meet the objective of the Project; and/or
- 6) have adverse, potentially significant social and economic consequences locally and regionally.

**EIR Conclusions for Impacts Related to Routine Operations and Accidental Spills (OS-1, BIO-3, FSH-1).**

Routine operations and accidental spills at the Shore MOT, or from vessels in transit near the MOT, or in vessel transit lanes, could result in a release of petroleum product in quantities greater than 50 barrels (2,100 gallons). A large spill could result in significant adverse environmental impacts, and/or residual impacts to operational safety, biological resources, and commercial and sport fisheries.

The EIR presents a comprehensive set of mitigation measures for adoption by the CSLC. The mitigation measures would reduce, to the maximum extent feasible, the probability, severity, or frequency of a spill or accident at the Shore MOT or near a vessel in transit.

Measures specific to the operational safety of the Shore MOT include the following:

- installation of tension monitoring systems;
- replacement of the existing loading arms with loading arms that have quick-connect/disconnect couplers and emergency quick-release systems;
- installation of mooring quick-release devices that shall be able to be activated within 60 seconds; and
- installation of Allision Avoidance Systems at the Shore MOT to prevent damage to the wharf and/or vessel during docking operations and to monitor drift when the vessel is moored.

Measures specific to minimizing the effect of accidental spills on biological resources include the following:

- developing clean up procedures in consultation with biologists from California Department of Fish and Game and the National Marine Fisheries Service;
- implementing bird rescue and rehabilitation procedures; and
- conducting post-spill studies.

These measures would increase immediate spill response capability and promote potentially critical actions that would be within Shore's on-site capability to implement and execute to reduce potential spill effects to Bay-Delta ecosystems.

Additional measures specific to minimizing the effect of accidental spills on commercial and sport fisheries include posting notices at spill sites, marinas, launch ramps, and fishing sites; and providing financial compensation to affected fishing operations or related businesses.

**EIR Conclusions for Impacts Related to the Introduction of Non-Native Species from Ballast Water Discharge and/or Vessel Biofouling (BIO-1, BIO-2, and HWQ-1).**

Effective systems for the treatment of ballast water to remove all associated organisms have not yet been developed. However, measures in the EIR specific to ballast water discharge and vessel biofouling at the Shore MOT include the following.

- Shore shall not discharge any non-segregated ballast water received at the MOT to San Francisco Bay. If Shore 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.
- Shore shall advise owners, operators, and shipping agents representing vessels calling at the MOT about the California Marine Invasive Species Act and associated regulations, and shall ensure that the vessel is in compliance with Public Resources Code section 71204, subdivisions (e) and (f), and California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.8.
- Shore shall ensure that all vessels submit required reporting forms, as applicable for each vessel, to the CSLC's Marine Facilities Division, including but not limited to, the Ballast Water Reporting Form, the Hull Husbandry Reporting Form, the Ballast Water Treatment Technology Reporting Form, and/or the Ballast Water Treatment Supplemental Reporting Form 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 MOT.

**BENEFICIAL IMPACTS OF THE PROJECT THAT MEET PROJECT OBJECTIVES**

State CEQA Guidelines section 15093, subdivision (a), requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project.

The Shore MOT has operated at its current location, transferring petroleum products, since 1981.<sup>3</sup> The provision of a lease to Shore to continue its existing MOT operations for another 30 years will have numerous benefits to the State of California (State) and the region served by the Shore MOT.

### **Region-wide Benefits**

A new 30-year lease from the CSLC of approximately 10.09 acres of sovereign tide and submerged land would allow Shore to continue to operate the Shore MOT as a barge/tanker transfer facility for petroleum products. The Shore MOT is capable of operating 365 days a year, 24 hours a day, although actual operation depends on shipping demands. The Shore MOT supports the Shore Main Terminal, located southwest of the MOT on approximately 50 acres of Shore-owned land. The primary service areas for the Shore Main Terminal are the San Francisco Bay and Sacramento regions.

A key benefit of the Project is to maintain the Shore Main Terminal's operational viability by continuing current Shore MOT operations through which the Shore Main Terminal both receives and ships petroleum products. Without the Shore MOT to both deliver and receive petroleum products, the Shore Main Terminal could attempt to operate solely on pipeline deliveries; however, the throughput would be reduced substantially, by approximately 40 percent of total volume handled. If, due to the loss of the Shore MOT, it became uneconomical to operate the Shore Main Terminal, and no other operator assumed any of the functions of the Shore MOT, direct and indirect local and regional consequences could result. Ultimately the reduction in infrastructure and capacity would weaken the economics, health, and security of the region.

The future demand for petroleum products in the region is not expected to decrease. Without the Shore MOT, other MOTs in the Bay area may be taxed, potentially increasing vessel congestion, collisions, as well as the costs while vessels wait to berth and offload/load.

### **Benefits to the State Economy**

The Shore MOT and Shore Main Terminal are key links in the logistic chain associated with refiners' inbound and outbound shipments on the west coast. Shore leases storage tankage to various companies who utilize tank vessels and pipelines to deliver clean products. These commodities ship in and out of the facility by tank vessel, rail, truck, and pipeline. The Shore MOT and Main Terminal also store and deliver jet fuels for the U.S. Government for military and Homeland Security use.

The California Energy Commission (CEC) forecasts that demand for transportation fuels will continue to increase as the economy recovers from the recent recession. In its *2009 Integrated Energy Policy Report* (Publication No. CEC-100-2009-003-CMF), the CEC states:

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<sup>3</sup> Shore's existing lease (PRC 5735.1) was issued to former owners, Wickland, in 1981 and assigned to Shore in 1998.

*California needs sufficient fuel infrastructure to ensure reliable supplies of transportation fuels for its citizens. Reliance on foreign oil imports increasingly puts the state's fuel supply at risk, not only because of security and reliability concerns, but also because the marine ports are not expanding to meet expected growth in demand. Until new vehicle technologies and fuels are commercialized, petroleum will continue to be the primary fuel source for California's vehicles. The state will need to enhance and expand the existing petroleum infrastructure, particularly at in-state marine ports, as well as its alternative fuel infrastructure.*

The CEC's 2009 Integrated Energy Policy Report also makes the following recommendation:

*To maintain energy security, state and local agencies need to ensure that there is adequate infrastructure for the delivery of transportation fuels. The state should modernize and upgrade the existing infrastructure to accommodate alternative and renewable fuels and vehicle technologies as they are developed and to address petroleum infrastructure needs to preserve past investments and to expand throughput capacity in the state.*

Maintaining existing facilities such as the Shore MOT and Shore Main Terminal, which currently meet State and local environmental requirements, is critical to meeting existing demand. Any future or alternative projects to construct petroleum product storage and handling capacity would require extensive environmental assessment, which may delay the construction of new infrastructure needed to support demand.

## **OVERRIDING CONSIDERATIONS CONCLUSION**

The Project objective to provide product loading/unloading services for oil companies, distributors, and brokers in the San Francisco Bay, Sacramento, and Northern California region would not be met if the lease for the Shore MOT is not granted.

If the lease is not granted for the Shore MOT, meeting California's demand for petroleum products would require other MOTs in the area to provide access to tankers and barges that would otherwise use the Shore MOT. The rerouting activities would tax the other terminals already operating near maximum capacity, alter vessel traffic patterns within San Francisco Bay, potentially increase congestion in San Francisco Bay waters, and raise pumping rates/turnover at these terminals. This could potentially increase fuel expenditure for fuel production and elevate the risk of significant leaks and spills to the Bay environment.

Without the Shore MOT through which to transfer petroleum products, the Shore Main Terminal could attempt to operate solely on pipeline deliveries. If, due to the loss of the Shore MOT, it became uneconomical to operate the Shore Main Terminal, and no other operator assumed any of the functions of the Shore MOT, direct and indirect local and regional consequences could result. Ultimately the reduction in infrastructure and capacity would weaken the economics, health and security of the region.



The CSLC further finds that all mitigation measures identified in the EIR have been imposed to avoid or lessen impacts to the maximum extent feasible. Based upon the above discussion, the CSLC finds that the benefits of the proposed Project outweigh the unavoidable adverse environmental effects, and considers such effects acceptable.

Data to support the overriding factors are found in the EIR, including in the following sections: Introduction, Project Description, Operational Safety/Risk of Accidents, Biological Resources, Commercial and Sport Fisheries, and Hydrology and Water Quality.