

CALENDAR ITEM  
**C80**

MINUTE ITEM  
This Calendar Item No. C80  
was approved as Minute Item  
No. 80 by the State Lands  
Commission by a vote of 3  
to 0 at its 02/12/97  
meeting.

A: 1, 6, 12, 13, 14, 16, 19, 21, 27, 33, 35, 37,  
41, 53, 54, 67, 70, 73, 74, 78

02/12/97  
W 9777:106

S: 2, 3, 8, 9, 11, 15, 18, 19, 23, 27, 28, 35,  
38, 39, 40

R. Holly  
J. Kloman  
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**CONSIDER ADOPTION OF REGULATIONS  
ESTABLISHING STRUCTURAL REQUIREMENTS FOR  
MARINE VAPOR CONTROL SYSTEMS AT MARINE TERMINALS**

**PROPOSAL:**

In order to ensure the safe installation and operation of marine vapor control systems (VCSs) at marine terminals, the Commission staff proposes that the State Lands Commission adopt certain regulations comprised of Sections 2550 through 2556 in Title 2, Division 3, Chapter 1, Article 5.4 of the California Code of Regulations. A VCS is a system which collects hydrocarbon vapors displaced from cargo tanks when ships are being loaded or unloaded, thereby preventing those vapors from being released into the atmosphere. The collected pollutants are instead transferred by pipelines to a unit for thermal destruction or recovery. The Commission Staff has discovered in the past that some of these systems are placed on wharfs or in locations that provide inadequate stability and support. This can give rise to structural failure, leading to fires, explosions or oil spills. These regulations would require that any new VCS be installed in accordance with specified existing engineering standards and that structures supporting existing VCS's be inspected to ensure sufficient integrity and support.

**BACKGROUND:**

On September 24, 1990, the State of California enacted the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Act). The Act added Public Resources Code Section 8750 through 8760, establishing a comprehensive program for the prevention of oil spills in California's marine waters. Under Public Resources Code Section 8755, the Commission is required to adopt rules, regulations, guidelines and leasing policies for reviewing the location, type, character, performance standards, size and operation of all existing and proposed marine terminals within the state, whether or not on lands leased from the Commission, to minimize the possibilities of a discharge of oil. Public Resources Code Section 8756 requires that the regulations be periodically reviewed and accordingly modified to ensure that all operators of marine terminals within the

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state always provide the best achievable protection of the public health and safety and the environment. The provisions presented here are proposed pursuant to those statutory requirements.

These regulations were developed only after discussions with a technical advisory committee (TAG) comprised of representatives of those affected by or interested in the proposal. The public has also had an opportunity to review and comment on the proposal during a two-month comment period and at a public hearing held on October 31, 1996. Finally, the Review Subcommittee of the State Interagency Oil Spill Committee has reviewed the proposal. Few comments have been received, and Staff has responded to those submitted.

According to Commission staff estimates, the costs incurred for each new VCS installation would range from \$60,000 to \$100,000. However, since these costs would be incurred in any case if the structural support were designed and constructed to meet existing sound engineering practices, these regulations would not add a significant burden. Furthermore, the additional inspection requirements for existing systems would be carried out in conjunction with existing terminal inspection programs. Only if it is found that an existing VCS is not provided with adequate structural support would modifications be required. In any case, none of those who would be affected by the regulations are considered small businesses under the Government Code. The proposed regulations would therefore have no significant impact on the creation or elimination of any new or existing jobs or businesses within California, nor would they have a significant adverse economic impact on business, including the ability of California businesses to compete with businesses in other states.

The Commission staff considered a number of alternatives to the proposed regulations, but found none that would be more effective in carrying out the purpose for which the action is proposed and less burdensome to those who would be affected.

**STATUTORY AND OTHER REGULATIONS:**

Public Resources Code Sections 8750 through 8760.

**PERMIT STREAMLINING ACT DEADLINE:**

N/A.

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**OTHER PERTINENT INFORMATION:**

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Code Regs. 10561), the Commission staff has determined that this activity is exempt from the requirements of the CEQA as a categorically exempt project. The project is exempt under classes 7 and 8, Action by a Regulatory Agency as Authorized by State Law to Assure the Maintenance, Restoration, Enhancement or Protection of a Natural Resource and of the Environment where the Regulatory Process involves Procedures for Protection of the Environment, 14 Cal. Code Regs. 15307 and 15308.

Authority: Public Resources Code Section 21084 and 14 Cal. Code Regs. 15300.

2. The proposed regulations do not affect small businesses as defined in Gov. Code Section 11342, sub. (h), because all affected businesses are either petroleum refiners, as specified under Gov. Code Section 11342, sub. (h)(2)(H), or transportation and warehousing businesses having annual gross receipts of more than \$1,500,000, as specified under Gov. Code Section 11342, sub. (h)(2)(I)(vii).

**EXHIBIT:**

- A. Proposed Regulations.

**IT IS RECOMMENDED THAT THE COMMISSION:**

1. FIND THAT THE ACTIVITY IS EXEMPT FROM THE REQUIREMENTS OF CEQA PURSUANT TO 14 CAL. CODE REGS. 15061 AS A CATEGORICALLY EXEMPT PROJECT, CLASSES 7 AND 8, AN ACTION BY A REGULATORY AGENCY AS AUTHORIZED BY STATE LAW TO ASSURE THE MAINTENANCE, RESTORATION, ENHANCEMENT, OR PROTECTION OF NATURAL RESOURCES AND OF THE ENVIRONMENT WHERE THE REGULATORY PROCESS INVOLVES PROCEDURES FOR THE PROTECTION OF THE ENVIRONMENT (14 CAL. CODE REGS. 15307 AND 15308).

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2. FIND THAT THE REGULATIONS DO NOT AFFECT SMALL BUSINESSES AS DEFINED IN GOV. CODE SECTION 11342, SUB. (h), BECAUSE ALL AFFECTED BUSINESSES ARE EITHER PETROLEUM REFINERS, AS SPECIFIED UNDER GOV. CODE SECTION 11342, SUB. (h)(2)(H), OR TRANSPORTATION AND WAREHOUSING BUSINESSES HAVING ANNUAL GROSS RECEIPTS OF MORE THAN \$1,500,000, AS SPECIFIED UNDER GOV. CODE SECTION 11342, SUB. (h)(2)(I)(VII).
3. FIND THAT THE REGULATIONS WILL NOT HAVE A SIGNIFICANT IMPACT ON THE CREATION OR ELIMINATION OF JOBS OR NEW OR EXISTING BUSINESSES WITH CALIFORNIA, NOR WILL THEY HAVE AN ADVERSE ECONOMIC IMPACT ON BUSINESS, INCLUDING THE ABILITY OF CALIFORNIA BUSINESSES TO COMPETE WITH BUSINESSES IN OTHER STATES.
4. FIND THAT NO ALTERNATIVE WOULD BE MORE EFFECTIVE IN CARRYING OUT THE PURPOSE FOR WHICH THE REGULATION IS PROPOSED OR WOULD BE AS EFFECTIVE AND LESS BURDENSOME TO AFFECTED PRIVATE PERSONS THAN THE PROPOSED REGULATION.
5. ADOPT REGULATIONS SUBSTANTIALLY IN THE FORM OF THOSE SET FORTH IN EXHIBIT "A", TO BECOME EFFECTIVE IMMEDIATELY UPON FILING WITH THE SECRETARY OF STATE.
6. AUTHORIZE THE COMMISSION STAFF TO MAKE MODIFICATIONS IN THE REGULATIONS IN RESPONSE TO RECOMMENDATIONS BY THE OFFICE OF ADMINISTRATIVE LAW.
7. DIRECT THE COMMISSION STAFF TO TAKE WHATEVER ACTION IS NECESSARY AND APPROPRIATE TO COMPLY WITH PROVISIONS OF THE GOVERNMENT CODE REGARDING ADOPTION OF REGULATIONS AND TO ENSURE THAT THE REGULATIONS BECOME EFFECTIVE.
8. DIRECT COMMISSION STAFF TO TAKE WHATEVER ACTION IS NECESSARY AND APPROPRIATE TO IMPLEMENT THE PROVISIONS OF THE REGULATIONS AT SUCH TIME AS THEY BECOME EFFECTIVE.

**Article 5.4. Structural Requirements for Marine Vapor Control  
Systems at Marine Terminals.**

**§2550. Purpose, Applicability and Date of Implementation.**

- (a) The purpose of the regulations in Title 2, Division 3, Chapter 1, Article 5.4 of the California Code of Regulations is to provide the best achievable protection of the public health and safety and of the environment by using the best achievable technology for the installation, inspection and reassessment of Vapor Control Systems at marine terminals.
- (b) The provisions of Article 5.4 apply to Vapor Control Systems installed at marine terminals.
- (c) When a Vapor Control System or VCS at a marine terminal is connected to a facility VCS that serves tank storage areas and other refinery processes located beyond the boundaries of the marine terminal, the specific requirements of this article apply between the vessel vapor connection and the point where the marine terminal VCS connects to the facility's main VCS.
- (d) Unless otherwise specified in this article, all of the provisions of this article become effective thirty (30) days after they have been filed with the Secretary of State.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8751, 8755, 8756 and 8757, Public Resources Code.

**§2551. Review of Engineering Practice, Structural Calculations and Drawings.**

At least sixty (60) days prior to any installation or modification of a VCS or to structures supporting a VCS, any and all plans, calculations, specifications, drawings, analyses and reports required by §§2553, 2554, 2555 and 2556 of this Article 5.4 shall be signed by an engineer and submitted to the Division to review for conformity with good engineering standards, principles and practice and compliance with this article.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8751, 8755, 8756 and 8757, Public Resources Code.

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**§2552. Definitions.**

Unless the context otherwise requires, the following definitions shall govern the construction of this article:

- (a) "Division" means the staff of the Marine Facilities Division of the California State Lands Commission.
- (b) "Division Chief" means the Chief of the Marine Facilities Division or any employee of the Division authorized by the Chief to act on his behalf.
- (c) The term "Engineer" means a civil, structural or geotechnical engineer licensed by the state of California.
- (d) An "Existing Vapor Control System" or "EVCS" means either of the following:
  - (1) A VCS which was installed at a marine terminal and first operated prior to December 31, 1996; or,
  - (2) A VCS which was installed at a marine terminal and first operated as an NVCS after December 31, 1996, but which was subsequently certified in writing by a designated certifying entity and approved for operation by the U. S. Coast Guard. The change in designation from an NVCS to an EVCS shall be effective twenty-four hours after both certification and approval have occurred.
- (e) A "New Vapor Control System" or "NVCS" means a VCS which is not an Existing Vapor Control System or EVCS.
- (f) "Marine Terminal" means a facility, other than a vessel, located on or adjacent to marine waters in California, used for transferring oil to or from tank vessels or barges. The term references all parts of the facility including, but not limited to, structures, equipment and appurtenances thereto used or capable of being used to transfer oil to or from tank vessels or barges. For the purpose of these regulations, a marine terminal includes all piping not integrally connected to a tank facility.
- (g) A "Tank Facility" means any one or combination of above ground storage tanks, including any piping which is integral to the tank, which contains crude oil or its fractions and which is used by a single business entity at a single location or site. A pipe is integrally related to an above ground storage tank if the pipe is connected to the tank and meets any of the following:

- (1) The pipe is within the dike or containment area;
  - (2) The pipe is connected to the first flange or valve after the piping exits the containment area; or
  - (3) The pipe is connected to the first flange or valve on the exterior of the tank, if state or federal law does not require a containment area.
- (h) A "Vapor Control System" or "VCS" means an arrangement of piping and equipment used to control vapor emissions collected from cargo tanks of tank vessels or barges at a marine terminal. For the purpose of these regulations, a VCS includes any and all vapor collection systems, any and all vapor processing and destruction units, any and all vapor recovery units and any and all VCS equipment installed at a marine terminal.
- (i) "VCS Equipment" means any and all components of a VCS, including, but not limited to, critical piping, control systems, and liquid knockout vessels.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8750, 8751, 8755, 8756 and 8757, Public Resources Code.

**§2553. Structures supporting NVCS or New VCS Equipment to be Installed as part of a Marine Terminal but not on the Wharf or Pier.**

- (a) This section shall apply only to NVCS or new VCS equipment that is to be installed within and as part of a marine terminal, but not on a wharf or pier. Unless it will result in a significant increase in loading to supporting structures, this section does not apply to planned or emergency VCS equipment change-outs or one-for-one part replacements.
- (b) At least sixty (60) days prior to installation of an NVCS or new VCS equipment, the terminal operator shall submit to the Division a comprehensive soils report, including, but not limited to, data on all geotechnical properties necessary and appropriate for analysis and design of foundations for the NVCS or new VCS equipment. The geotechnical report submitted for Division review shall be signed by a geotechnical engineer.
- (c) Any structure or foundation providing support for an NVCS installed at a marine terminal shall, at a minimum, conform to the Uniform Building Code, 1994 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601.

- (d) Supports for VCS components mounted on skids shall, at a minimum, conform with the Uniform Building Code, 1994 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601. The effects of seismic, wind and dead, live and other appropriate loads, using applicable load combinations shall be considered in designing the individual tie-downs of components to the skid. Steel skirts, supporting structural elements, vessels, controls and detonation arresters shall all be considered for connection and load transfer to the base skid and foundation.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8751, 8755, 8756 and 8757, Public Resources Code.

**§2554. Structures supporting New VCS Equipment to be Installed on Areas of Existing Wharves or Piers Overhanging the Water or Wetlands.**

- (a) This section shall apply only to NVCS or new VCS equipment that is to be installed on a wharf or pier at a marine terminal.
- (b) Any portion of a structure providing lateral or vertical support to a skid mounted prefabricated VCS component or equipment shall be upgraded to the current structural design and analysis set forth in the following manuals, codes and recommended practice, as appropriate:
- (1) Uniform Building Code, 1994 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601.
  - (2) Bridge Design Specifications Manual, December 31, 1995 Edition, published by the State of California, Department of Transportation, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, CA 95815-3800.
  - (3) MIL-Handbook 1025/1, "Military Handbook - Piers and Wharves", October 30, 1987, published by the Department of the Navy, Defense Printing Service, Detachment Office, 700 Robbins Avenue, Philadelphia, PA 19111-5094.
  - (4) MARINE TERMINAL AUDIT MANUAL, Second Edition, March 1996, prepared by the California State Lands Commission, Marine Facilities Division, 330 Golden Shore, Suite 210, Long Beach, CA 90802-4246.



- (c) Under certain conditions, such as near fault phenomena or deep alluvia, the structural response may significantly amplify the lateral loads at the base of any VCS equipment. When such conditions prevail, the Division may require a more rigorous treatment, such as a dynamic analysis of the structure and VCS equipment using a locally accepted site-specific response spectrum. The methodology of any such additional analysis shall be determined by an engineer.
- (d) All analyses and design performed under the provisions of this section shall be submitted to the Division for review.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8751, 8755, 8756 and 8757, Public Resources Code.

**§2555. Inspection and Reassessment of EVCS Structural Installations.**

- (a) This subsection (a) shall apply to all EVCS and EVCS equipment installed on a wharf or pier.
  - (1) The Terminal Operator shall carry out or cause to be carried out a thorough inspection of all structural members providing lateral or vertical support to the EVCS and EVCS equipment to determine the structural integrity of the installation. Each inspection shall be carried out in the same manner, utilizing the procedures for performing structural and safety system audits as set forth in the MARINE TERMINAL AUDIT MANUAL, Second Edition, March 1996, prepared by the California State Lands Commission, Marine Facilities Division, 330 Golden Shore, Suite 210, Long Beach, CA 90802-4246, at the following maximum intervals:

<b>Construction Material</b>	<b>Inspection Interval</b>
Timber	Three Years
Concrete	Six Years
Steel	Six Years

- (2) A report of the inspection of the EVCS structural installation, which documents damage to piles, beams, decks, bumping systems, dolphins and other structural elements, and which contains an evaluation by an engineer, including a description of remedial measures taken, shall be

submitted to the Division for review. If internal damage to piles, beams or deck components is suspected, the inspection shall include non-destructive testing as required by the Division, to establish the component's structural integrity with certainty.

(3) Based on the severity of an inspection report showing structural damage, pest damage, damage caused by impact, corrosion, or any other damage or deterioration that might affect the safety or operation of the VCS, and any damage at the terminal that is reported under the provisions of 2 CCR §2325(e), a more frequent cycle of inspections may be established by the Division.

(b) This subsection (b) shall apply to all EVCS and EVCS equipment at a marine terminal not installed on a wharf or pier.

(1) The Terminal Operator shall carry out or cause to be carried out a thorough inspection of visible structural members providing lateral or vertical support to the EVCS and EVCS equipment to determine the structural integrity of the installation. As a minimum, each major component should be inspected for lateral restraint for seismic loads, and for dead plus live vertical loads being transferred to the structure. The inspection interval shall be a maximum of six (6) years.

(2) A report of the inspection of the EVCS structural installation, which documents damage to structural elements, and which contains an evaluation by an engineer, including a description of remedial measures taken, shall be submitted to the Division for review.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8751, 8755, 8756 and 8757, Public Resources Code.

**§2556. Alternatives.**

(a) Petitions for Alternatives.

(1) Any person subject to these regulations may submit a petition to the Division Chief for alternatives to the requirements of this Article 5.4.

(2) All petitions for alternatives must be submitted in writing. A petition may be in any form, but it must contain all data and information necessary to evaluate its merits.

(b) Response to Petitions.

- (1) The Division Chief shall acknowledge in writing the receipt of any petition for alternatives within ten (10) days of receipt of the petition.
- (2) The Division Chief shall approve or disapprove any petition for alternatives within sixty (60) days of receipt of the petition. Such approval or disapproval shall be communicated to the petitioner in writing.

(c) Approval of Alternatives.

- (1) The Division Chief may approve any proposed alternatives to the requirements of this Article 5.4, if it can be determined that compliance with the proposed alternatives will ensure an equivalent or greater level of protection of the public health and safety and the environment than that established by this Article 5.4.
- (2) If the Division Chief approves any proposed alternatives under this section, a letter of approval shall be issued to the petitioner setting forth the findings upon which the approval is based, and a copy of that letter shall be maintained with the terminal's operations manual required by 2 CCR §2385.
- (3) The Division Chief may withdraw the letter of approval of any alternative to the requirements of this Article 5.4, any time the Division verifies that the person or persons subject to these regulations have not regularly and consistently complied with the approved alternative requirements.
- (4) Withdrawal of approval of any alternatives to requirements under this Article 5.4, shall be effective immediately upon receipt by the petitioner of written notification of the withdrawal from the Division Chief.

Authority: Sections 8751, 8755 and 8756, Public Resources Code.

Reference: Sections 8751, 8755, 8756 and 8757, Public Resources Code.