

MINUTE ITEM
This Calendar Item No. 52
was submitted for information
only, no action thereon
being necessary.

Minute Item
52

02/08/00
W 9777.226
M. Eskijian
J. Freckman

INFORMATIONAL- CALIFORNIA STATE LANDS COMMISSION
(PARTY)

Regular Calendar Item 52. Commission listened to a status report on the Marine Oil Terminal Engineering Regulations Project (MOTERP). This was an informational item, no action was taken.

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**INFORMATIONAL
CALENDAR ITEM
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02/08/00
W 9777.226
(Negotiators: M. Eskijian
J. Freckman)

**MARINE OIL TERMINAL ENGINEERING REGULATIONS PROJECT
(MOTERP)
Progress Report – February 2000**

Executive Summary

The Marine Oil Terminal Engineering Regulations Project (MOTERP) started in December 1998, with the task of developing comprehensive engineering regulations for marine oil terminals in California. The effort focuses on the rehabilitation and upgrading of existing marine oil terminals, and is about one-half complete at this time. The total budget is \$1.8 million, and includes the seismic and tsunami hazard threat, addressed by researchers at the University of Southern California, and engineering criteria developed by the Marine Facilities Division of the State Lands Commission. Funding is from FEMA, through the Office of Emergency Services and supplemented with agency funds. Technical and public workshops are planned, prior to the draft being completed by the end of 2000. Additional opportunities for public review and comment will be provided prior to the project completion.

BACKGROUND

Following the Northridge Earthquake in early 1994, FEMA made available Hazard Mitigation Grants for projects that would help mitigate damage of future earthquakes in Orange, Los Angeles and Ventura Counties. Prior to that earthquake, we contributed to a California Seismic Safety Commission report entitled "California at Risk", documenting our involvement and interest in developing regulations to reduce the risk of pollution from coastal/offshore structures. This initial document provided the justification for the Marine Facilities Division to submit a proposal for FEMA funding of \$500,000, to develop seismic and fire regulations for marine oil terminals and related facilities. A Budget Change Proposal was approved for the State Lands Commission, to supplement the grant, with monies to complete the non-seismic portions of the standards. The agency funding level is \$300,000.

Two collateral projects, involving offshore seismic and tsunami hazard assessment will provide input to our proposed standards. These portions are funded for \$1,000,000 and are being performed at the University of Southern California. To be consistent with the FEMA/OES guidelines for these grants, this portion of the project focuses on the tri-county area (LA, Ventura and Orange). Our portion of the project extends to all marine oil terminals in California.

Because of limited staffing and the need for additional expertise in developing these standards, contractors were solicited. Two well-known coastal engineering firms, Han-

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Padron Associates and Ben C. Gerwick, Inc. joined together for this project and were awarded the contract. Additionally, we entered into a "Cooperative Research and Development Agreement" (CRADA) with the Navy Facilities Engineering Service Center in Port Hueneme, California, to supplement and complete the project. We believe that we have put together a team of the finest set of consultants and port engineers available in the United States. Our results will also be reviewed by the Japanese Port and Harbour Research Institute.

We have presented, discussed and/or met with experts from the Oil Companies International Marine Forum (OCIMF), the American Society of Civil Engineers (ASCE), and conducted a workshop in Southern California, involving engineers from the regulated community and the ports of Los Angeles, Long Beach and Oakland. Response has been enthusiastic; we plan for further workshops and more detailed peer review. In addition, the Port of Oakland has contracted with our engineering consultants, to develop rehabilitation standards for many of their facilities. We expect some of our seismic and structural design criteria to be utilized in this major project.

Current Status of MOTERP

The initial draft standards have been completed and are undergoing internal review. The document addresses both existing and new marine oil terminals, with the following topics:

- Structural and systems engineering inspection
- Structural loading
- Seismic analysis and design
- Mooring and berthing analysis and design
- Geotechnical hazards and foundation analysis
- Structural analysis and design of components
- Piping
- Electrical and mechanical equipment design
- Personnel access design
- Fire prevention, detection and suppression design

It is envisioned that the document will be similar to the Caltrans "Highway/bridge Design Specifications Manual" and "Seismic Design Criteria". Eventually, there will be a submission for Commission approval, of proposed regulations that adopt these standards by reference.

It is expected that the codification of these standards will generate quite a bit of dialog, particularly from the regulated community. Many of the facilities are older and will be required to upgrade in order to comply with the regulations that will be proposed. However, FEMA has already published a similar sort of structural rehabilitation standards for conventional structures. These standards are not regulatory, but

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constitute a "national set of guidelines for the seismic rehabilitation of existing buildings". Our effort is parallel to the FEMA document. The MOTERP project is in concert with the mandate of the Marine Facilities Division to "provide the best achievable protection of the public health, safety and the environment", as stated in the Lempert, Keene, Seastrand Oil Spill Prevention and and Response Act of 1990.

Future Schedule

Workshops are planned for 2000, and public hearings will follow. All aspects of the final document will be reviewed by technical advisory groups, the regulated community and ultimately the public. It is anticipated that the proposed set of regulations, referencing the standards will be submitted to the Commission for approval in 2001.