

Current Marine Terminal Decommissioning Projects

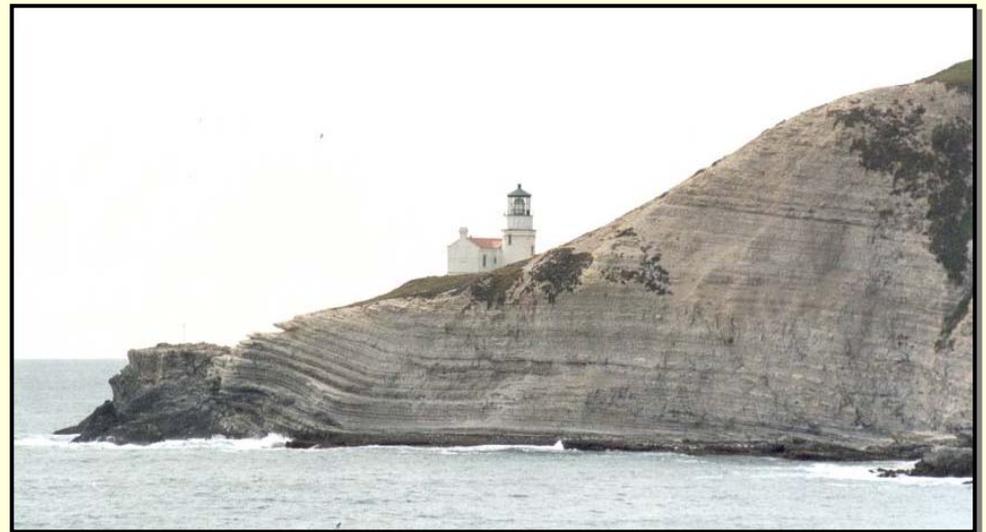
Environmental Issues and Project Responses

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Padre Associates, Inc.**



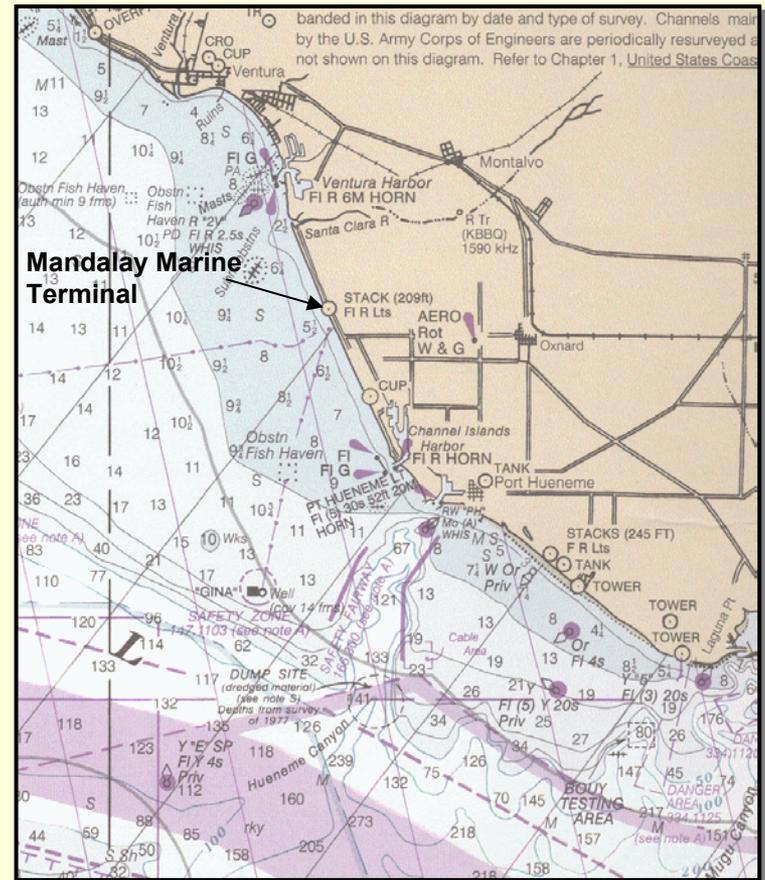
Presentation Outline

- Facility Overview
- Proposed Work Plans
- Permit Requirements
- Studies and Surveys
- Environmental Issues
- Project Solutions
- Conclusion and Acknowledgements



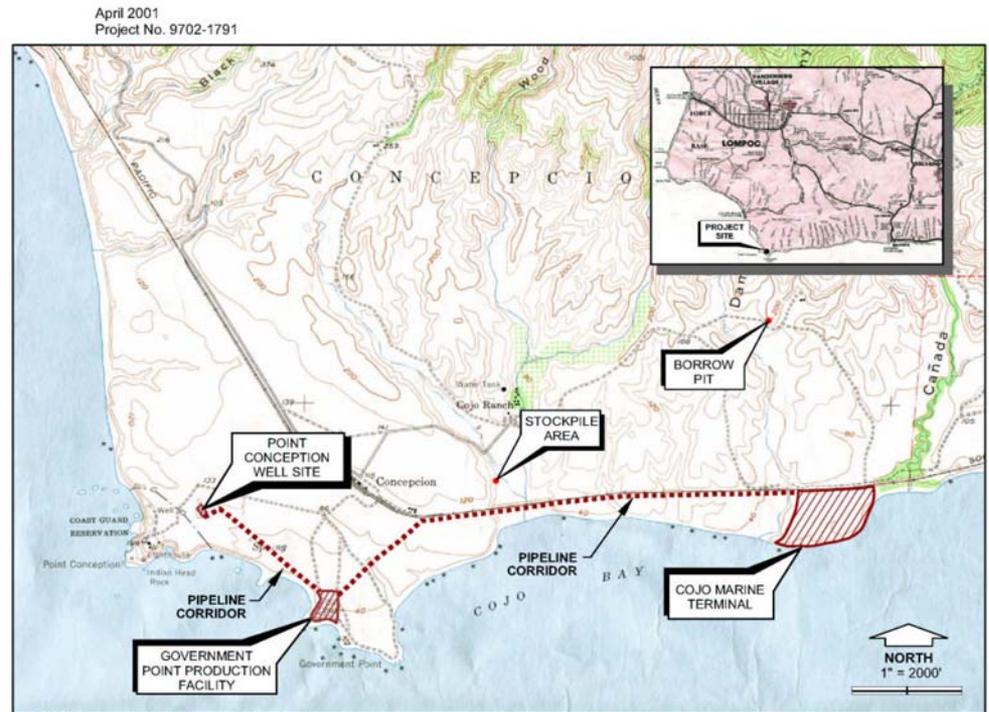
Mandalay Marine Terminal - Facility Location

- Mandalay Generating Station formerly owned by Southern California Edison (SCE)
- Located on the coast within the City of Oxnard, approximately 2.5 miles south of Ventura Harbor



Cojo Marine Terminal - Facility Location

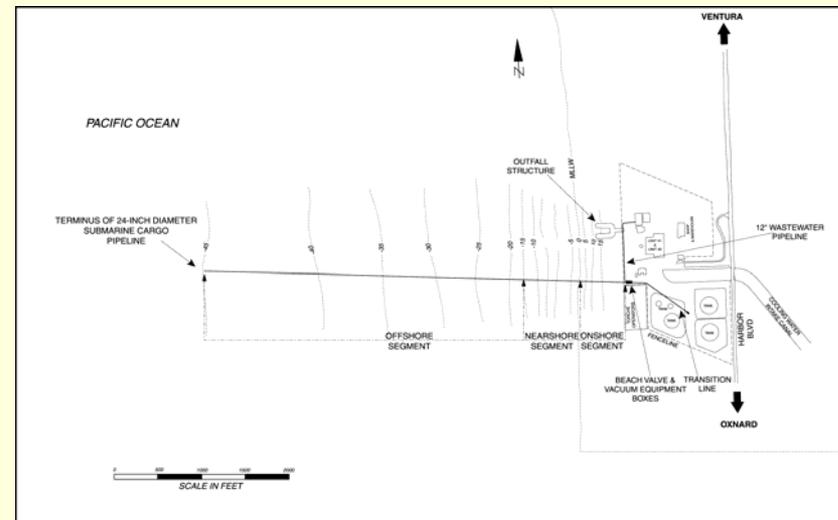
- Cojo Bay located east of Point Conception
- Owned by Bixby Ranch Company
- Marine Terminal - PRC 4849.1



SOURCE: U.S.G.S. Topographic Map, Point Conception Quadrangle (1974)

Mandalay Facility Components

- One-mile by 24-inch, subsurface fuel oil marine pipeline;
- Six steel anchors and/or concrete anchor blocks with mooring chains attached, located adjacent to the offshore terminus of the marine pipeline;
- Onshore concrete valve box containing misc. pumps, motor operated valve, electrical equipment, and piping;
- One piping connection from the onshore valve box to the Reliant Energy Mandalay LLC generating station waste water system; and
- One grounding and/or anode bed.



Cojo Facility Components

- One 55,000 barrel, welded steel, fixed roof crude oil storage tank;
- One Butler steel structure(29ft x 69ft) with concrete foundation;
- One small steel office structure (16ft x 26ft) with concrete foundation;
- A 2,000 by 10 ¾ inch diameter offshore marine loading line; and
- Misc. piping and electrical equipment



Mandalay Pipeline Issues

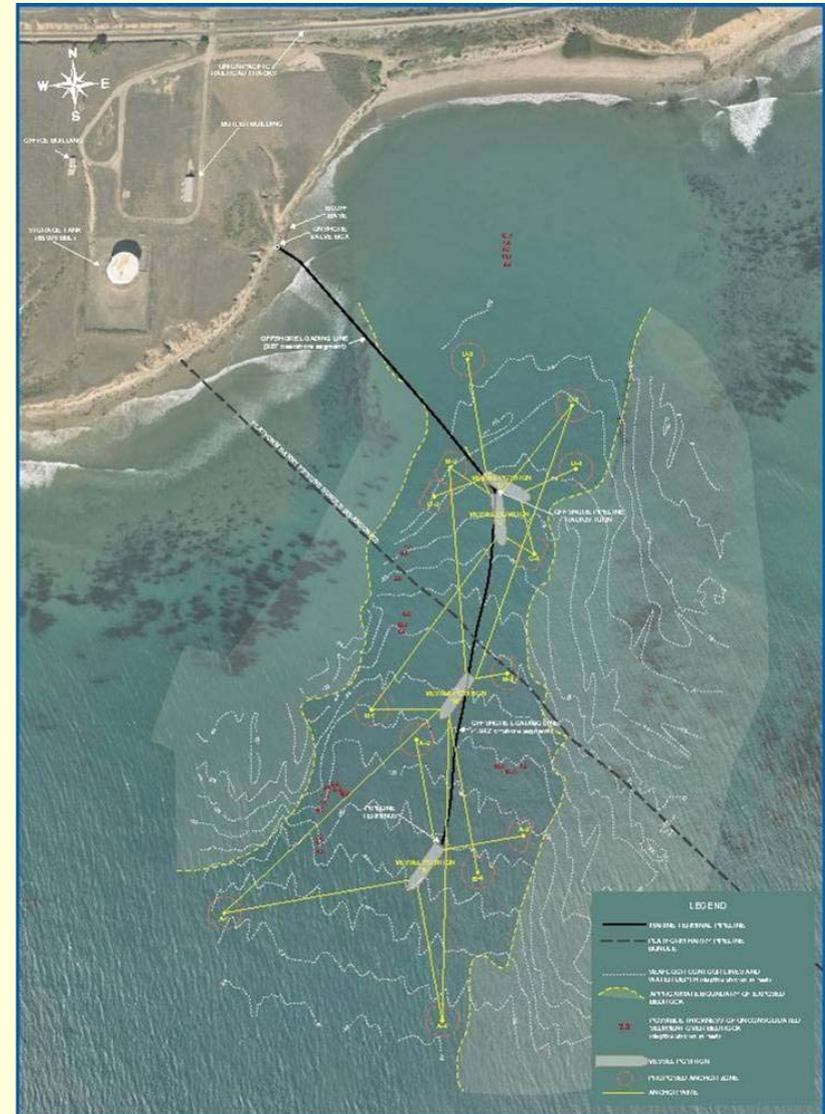
- One-mile long marine pipeline installed in 1958.
- Last Barge loaded on 2/21/91.
- Pipeline placed in caretaker status February, 1993.
- Buoys, hose, 1 anchor & majority of chain removed.
- Subsurface offshore mooring system still intact.
- Pipeline terminates at approximately -45 feet MLLW.
- Entire marine pipeline is located subsurface.
- Offshore end of pipeline, anchors, and chains have sunk beneath the seabed.
- Offshore pipeline overburden consists entirely of soft-bottom habitat.
- Onshore overburden consists entirely of migratory beach sands and dune complex habitat areas.

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Cojo Pipeline Issues

- 2,000 foot line installed in early 1960's
- Last Barge loaded in 1987
- Offshore mooring system removed
- Majority of line is buried in sediment trench.
- Trench surrounded by rocky reefs heavily populated with kelp.
- Line crosses Platform Harry pipeline
- Installed in notch cut through rocky surf zone area.



Required Studies and Surveys

- Coastal Process Analysis Study of offshore and near shore project areas.
- Biological Surveys of offshore, nearshore, and onshore habitat areas
- Depth Verification Survey of offshore pipeline
- Geophysical Survey

Criteria and Data Requirements

- Abandonment in Place
 - Depth of burial exceeds 5 feet.
 - Seasonal or periodic exposure not observed.
 - Depositional area with no dredging activities likely.
 - Environmental impacts associated with removal considered excessive in comparison to the benefit of removal.

Permit Requirements

- **Mandalay Marine Terminal**
 - SLC Permitting Lead for offshore component
 - SLC Single Lead / CEQA analysis.
 - City of Oxnard – Coastal Development Permit
 - California Coastal Commission CDP and onshore appeal
 - Army Corps of Engineers – 404 Permit for excavation of beach and offshore.
 - RWQCB – 401 Permit
 - U.S. Fish and Wildlife - review.
 - California Department of Fish and Game – review.
- **Cojo Marine Terminal**
 - County of Santa Barbara - CEQA Lead Agency/CDP/CUP.
 - California State Lands Commission – Lease Agreement.
 - California Coastal Commission CDP and onshore appeal.
 - Army Corps of Engineers – 404 Permit for excavation of beach, riparian corridors and offshore.
 - RWQCB – 401 Permit.
 - SB County Fire Dept. Protection Services Division.
 - U.S. Fish and Wildlife - review.
 - California Department of Fish and Game – 1603 Permit and Incidental Take Permit.
 - National Marine Fisheries Service – review.

Significant Environmental Issues

- **Mandalay Marine Terminal**
 - Water Quality due to Residual Hydrocarbons and biocide in Pipeline
 - Soil Contamination
 - Public Access and Safety
 - Biological Resources
 - Dune Habitat
 - Snowy Plovers and Least Terns
 - Grunion
 - Marine Mammals
 - Sand Dollars
- **Cojo Marine Terminal**
 - Soil Contamination
 - Fire Protection
 - Transportation
 - Biological Resources
 - Kelp Habitat
 - Rocky Habitat
 - Marine Mammals
 - Riparian Habitat
 - Gaviota Tar Plant
 - Cultural Resources

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Project Solutions

- **Mandalay Marine Terminal**
 - Pig and Flush Pipeline
 - Contaminated Materials Handling Plan
 - Public Notices, designated work corridor and onsite monitor
 - Biological Resources
 - Dune Habitat Restoration Plan
 - Biological Monitor and 500 foot setback
 - Monitoring and preclusion if eggs are present
 - Marine Mammal Monitor
 - Anchor Avoidance Plan
- **Cojo Marine Terminal**
 - Transportation offsite for Bioremediation
 - Traffic Safety Plan
 - Hot Work Procedures
 - Biological Resources
 - Anchoring Plan and Pre and Post Biological Survey
 - Marine Mammal Monitor with seasonal avoidance
 - Abandonment in place in creeks or pulling of pipelines
 - Avoidance and Restoration Plan
 - Cultural Resource Monitoring and abandonment in place.

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