

Current Marine Terminal Decommissioning Projects

Environmental Issues and Project Responses

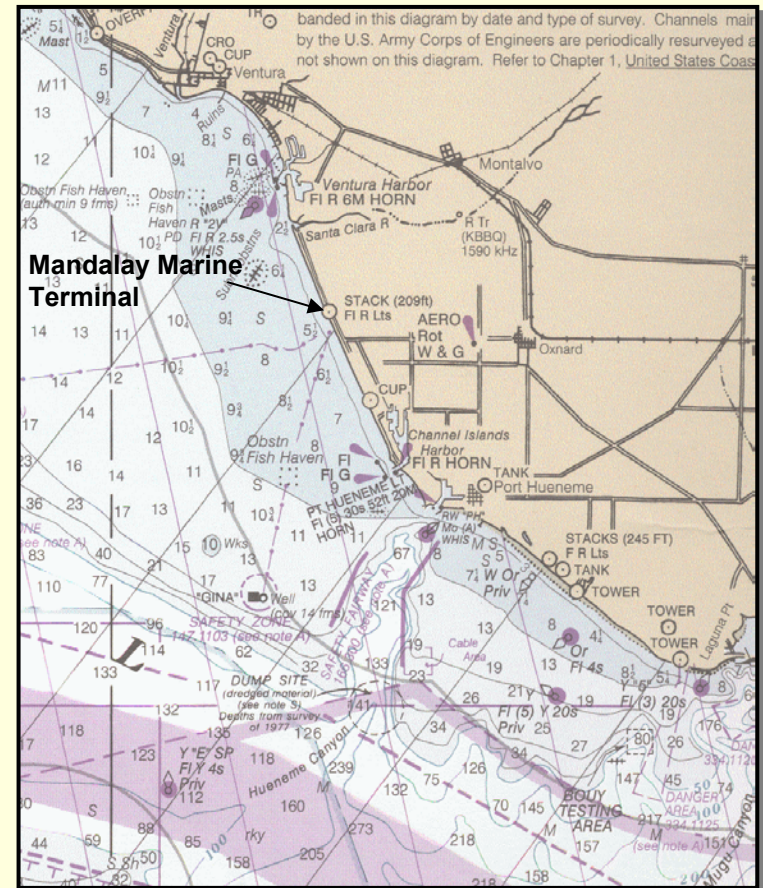
**Presented by: Simon A. Poulter
Padre Associates, Inc.**



Presentation Outline

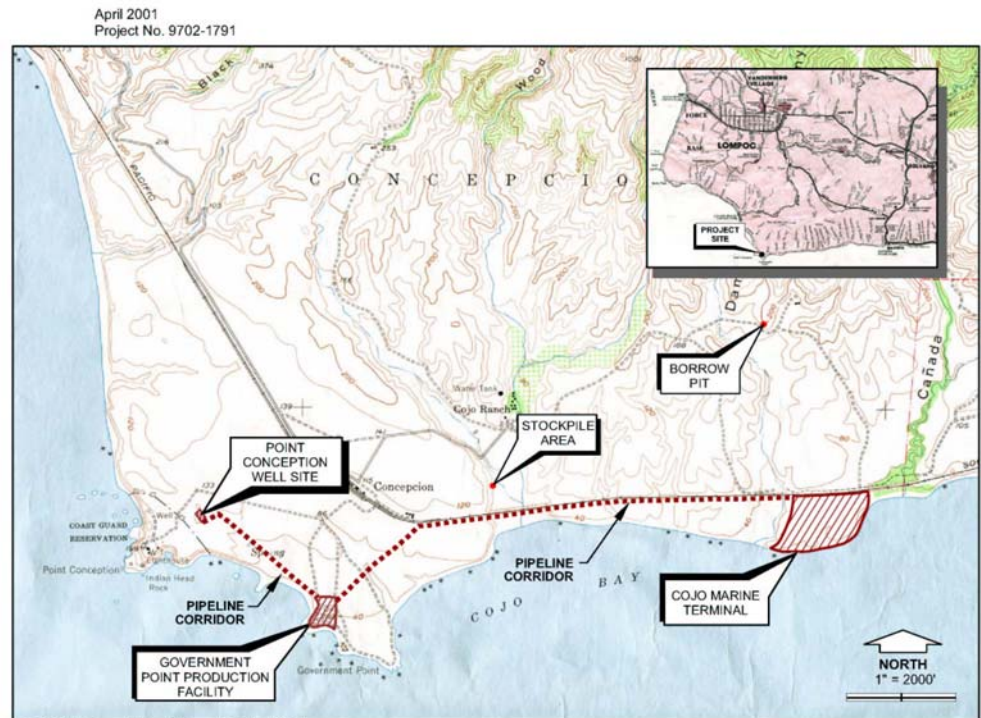
- Facility Overview
- Proposed Work Plans
- Permit Requirements
- Studies and Surveys
- Environmental Issues
- Project Solutions
- Conclusion and Acknowledgements





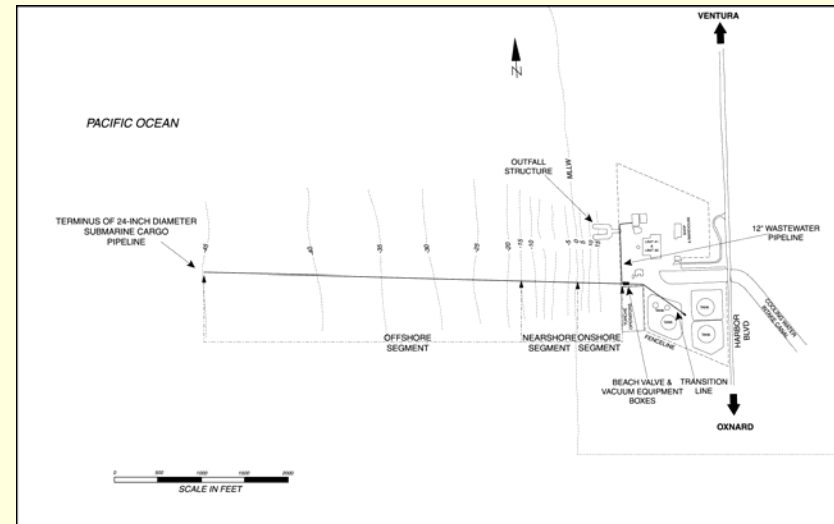
Cojo Marine Terminal - Facility Location

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



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 $\frac{3}{4}$ inch diameter offshore marine loading line; and
- Misc. piping and electrical equipment



Mandalay Pipeline Issues

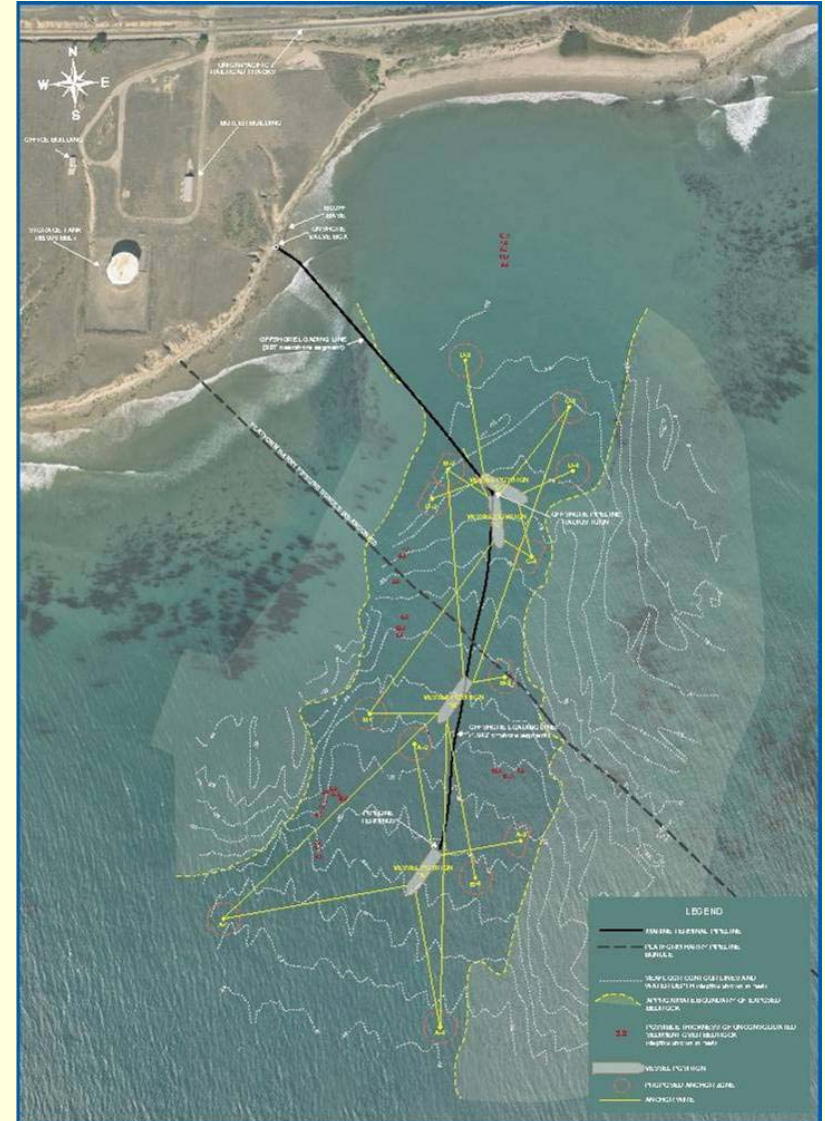
- One-mile long marine pipeline installed in 1958.
- Last Barge loaded on 2/21/91.
- Pipeline placed in caretaker status February, 1993.
- Buoys, hose, 1 anchor & majority of chain removed.
- Subsurface offshore mooring system still intact.
- Pipeline terminates at approximately -45 feet MLLW.
- Entire 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.

Current Marine Terminal Decommissioning Projects Environmental Issues and Project Responses



Cojo Pipeline Issues

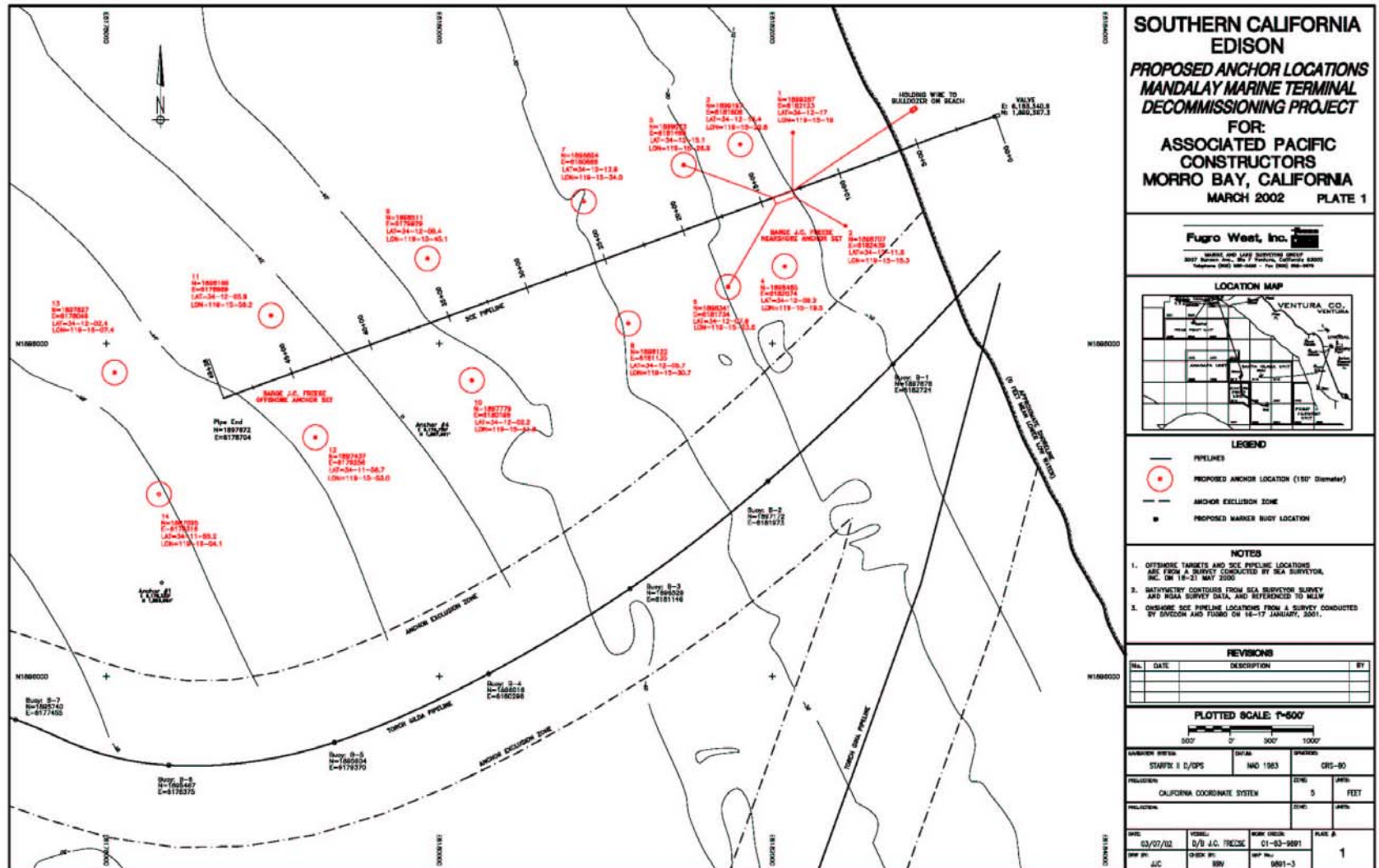
- 2,000 foot line installed in early 1960's
- Last Barge loaded in 1987
- Offshore mooring system removed
- Majority of line is buried in sediment trench.
- Trench surrounded by rocky reefs heavily populated with kelp.
- Line crosses Platform Harry pipeline
- Installed in notch cut through rocky surf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

Current Marine Terminal Decommissioning Projects Environmental Issues and Project Responses



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

Current Marine Terminal Decommissioning Projects Environmental Issues and Project Responses



Current Marine Terminal Decommissioning Projects Environmental Issues and Project Responses



Current Marine Terminal Decommissioning Projects Environmental Issues and Project Responses



Current Marine Terminal Decommissioning Projects Environmental Issues and Project Responses



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.

Acknowledgements

- Mandalay Marine Terminal
 - Southern California Edison
 - Danielle Chupa
 - Jack Peterson
 - Padre Associates, Inc.
 - Brian Dugas
 - Mike Weber
 - Jenn Carnine
 - Erin King
 - Chris Dunn
 - Mark Steffy
- Cojo Marine Terminal
 - Unocal Corporation
 - Russ Hanscom
 - Don Gluyas
 - Padre Associates, Inc.
 - Brian Dugas
 - Ray de Wit
 - Mark Steffy