Permitting for Offshore Projects, Complexities and Challenges
Topics of Discussion

- Overview of each of the projects and their technical challenges:
  - Calleguas Hueneme Outfall Project
  - Beta Unit Pipeline Replacement Project
  - PG&E 3D Seismic Study
- The permitting process including a review of the agency roles and responsibilities based on the changing regulatory requirements; and
- Application process and recommendations.
Calleguas MWD Salinity Management Pipeline
SMP Overview

- Pipeline system to transport saline water downstream for reuse or to an ocean outfall.
- Alignment roughly parallels Calleguas Creek and tributaries from Simi Valley to discharge point.
- Length: ~35 miles
- Diameter: 18-inch (upstream) to 48-inch (downstream)
- Maximum design flow: 30 cfs (13,500 gpm)
Outfall Plan
Hueneme Outfall - Key Issues

- Land Use
  - Growth Inducement
- Geology
  - Pipeline Construction Constraints
- Air Quality
  - Construction Impacts
- Water Quality
  - TMDL Compliance
  - NPDES Permit Limitations to Ocean Outfall
- Biological Resources
  - Impacts from outfall installation and operational discharges
- Agriculture
  - Beneficial Water Supply Impacts
- Risk of Upset
  - Discharge of drilling mud
- Construction Impacts
  - Noise
  - Aesthetics
  - Transportation
  - Cultural Resources
Hueneme Outfall - Agency Approvals

- Calleguas MWD
  - California Environmental Quality Act (CEQA) Lead Agency
- California State Lands Commission
  - Tidelands Lease
- California Coastal Commission
  - Coastal Development Permit (CDP)
- Regional Water Quality Control Board
  - NPDES Permit
  - 401 Certification
- Army Corps of Engineers
  - 404 Certification
- NOAA Fisheries / U.S. Fish and Wildlife Service (FWS)
  - Endangered Species Act (ESA) Consultation
- City of Port Hueneme – Encroachment Permit
- City of Oxnard – Encroachment Permit
- U.S. Coast Guard – Notice to Mariners
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Beta Unit Pipeline Replacement Project
Beta Unit Background

- Platforms located 9 miles offshore of Huntington Beach in 250 to 700 feet of water.
  - Elly and Ellen installed in 1980 with first production in 1981.
- Originally installed by Shell, now owned and operated by Beta Offshore
- Pipeline leak (12” produced fluids pipeline) in 1999.
- Platform Eureka shut-in until April 2008 when pipeline reconfirmation was approved by MMS.
- Beta Offshore become operator in May 2010 and is proposing to replace existing pipeline confirmation with new pipelines
DP Vessel Installation

REPLACEMENT 10" INJECTION WATER PIPELINE
CROSSING MAT

REPLACEMENT 10" GROSS FLUIDS PIPELINE
CROSSING MAT

DYNAMICALY POSTIONED REELED PIPE LAY VESSEL INTREPID
HAS LAY ACCURACY WITHIN 2 FEET
Beta Pipeline - Key Issues

- Geology
  - Marine Landslides and Gas Pockets
  - Pipeline Construction Constraints
- Biological Resources
  - Hardbottom Habitat
  - Marine mammal Impacts
- Risk of Upset
  - Increased Pipeline Safety
- Construction Impacts
  - Air Quality
  - Transportation
  - Cultural Resources
Beta Unit Pipeline - Agency Approvals

- MMS – BOEMRE – BOEM/BSEE
  - National Environmental Policy Act (Lead Agency)
- South Coast Air Quality Management District
  - Permit to Operate
- Regional Water Quality Control Board
  - 401 Certification
- Army Corps of Engineers
  - 404 Certification
- NOAA Fisheries / U.S. Fish and Wildlife Service (FWS)
  - Endangered Species Act (ESA) Consultation
- U.S. Coast Guard – Notice to Mariners
PG&E 3D Seismic Project Objectives

- Obtain improved deep (>1 km [>0.6 mi]) imaging of the Hosgri and Shoreline fault zones to better define fault geometry
  - in the vicinity of the DCPP
  - at the intersection of the Hosgri and Shoreline fault zones near Point Buchon
  - at the intersection of the San Simeon and Hosgri fault zones near Point Estero

- Expand regional seismic database
Proposed Action

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Box 1 – Offshore Diablo Canyon
Box 2 – Estero Bay to offshore Santa Maria River Mouth fault intersections
Box 3 – Offshore Cambria to Estero Bay
Box 4 – Estero Bay
Offshore Seismic Imaging Survey
- Cambria to Point San Luis in water up to 1,400 ft.
- Specialized survey vessel approximately 235 ft in length
- Two strings of tuned air guns with a volume of 3,300 in$^3$
- Vessel-towed hydrophone streamer array of 3.7 miles in length
- Additional scout and support vessels
Towed Air Gun Array and Hydrophone Streamers
3D Seismic Project - Key Issues

- Geology
  - Target Identification and Alternative Technologies
- Air Quality
  - Vessel Emissions
- Biological Resources
  - Impacts to fish resources
  - Impacts to marine mammals
    - Vessel movements
    - Noise impacts
- Commercial and Recreational Fishing
  - Preclusion
  - Long term impacts on fish populations
- Recreational Uses
  - Preclusion and noise impacts
Anticipated Agency Approvals

- California State Lands Commission
  - Geophysical Permit (Seismic Survey)
  - California Environmental Quality Act (CEQA) Lead Agency
- National Science Foundation
  - National Environmental Policy Act (NEPA) Lead
- NOAA Fisheries
  - Incidental Harassment Authorization (IHA)
  - Endangered Species Act (ESA) Consultation
- NOAA – Sanctuary Concurrence (Biological Resource Impacts)
- Army Corps of Engineers
  - 404 Certification for marine geophones
- U.S. Fish and Wildlife Service (FWS) (Sea Otter)
  - Incidental Harassment Authorization (IHA)
  - Endangered Species Act (ESA) Consultation
- California Coastal Commission
  - Coastal Development Permit (CDP)
  - Federal Consistency
- California Department of Fish & Game – CESA Permits/MPA Authorization
- California Dept. of Parks and Recreation – Encroachment Permit
- County of San Luis Obispo – Encroachment Permit
- U.S. Coast Guard – Notice to Mariners
Project Approach

- Clearly Define Project Approach and Phasing
- Kick-off Meeting – Define Critical Success Factors
  - Develop Workplan
- Determine Available Site Resource Information/Data Review
- Complete Engineering Review and Site Specific Surveys
- Evaluate Potential Project Resource Issues and Alternatives
- Identify Interested Parties and Resource Agencies
- Conduct Evaluation of Resource Issues
- Submit Comprehensive Application Package
- Prepare Final Documentation and Mitigation Compliance Plan
Key Application Inputs

- Clearly Defined Project Description
  - Detailed Engineering Review
  - Well Defined Work Procedures Equipment List
  - Construction Schedule
- Environmental Characterization including site specific surveys
  - Geophysical Survey
  - Biological Survey
  - Cultural Resource Survey
- Air Emissions Estimates and Mitigation Measures
- Critical Operations and Curtailment Plan
- Oil Spill Contingency Plan
- Mitigation Compliance Plan
- Marine Wildlife Contingency Plan