

Pacific Outer Continental Shelf Region (POCSR) Pipeline Inspection and Monitoring Program

BSEE currently regulates approximately 213 miles of pipelines in the POCSR. In 1990, the POCSR implemented a comprehensive inspection program that requires operators to use both internal and external inspection technologies in concert to assess the overall integrity of a pipeline. The inspection requirements are now conditions of approval for lease term pipelines and are stipulations for pipeline right-of-way grants.

The BSEE regulations at 30 CFR 250 Subpart J require that DOI-regulated pipelines and associated valves, flanges, and fittings in Federal offshore waters be designed, installed, operated and maintained to provide safe and pollution-free transportation of fluids. The regulations require that pipeline routes be routinely monitored for indication of pipeline leakage and that pipelines with a cathodic protection life expectancy of less than 20 years be inspected annually by taking measurements of pipe-to-electrolyte potential.

Inspection Program:

The POCSR pipeline inspection program requires that external and internal inspections be conducted in alternating years by a third party, unless approved otherwise. External surveys are done using remotely operated vehicles (ROV) or side scan sonar technology. ROV surveys include the recorded visual inspection of pipeline risers and riser clamps; any pipeline supports, debris or any other object which might constitute a pipeline safety concern or hazard; and rectifiersⁱ or anodesⁱⁱ. A close-interval cathodic protection surveyⁱⁱⁱ is conducted in conjunction with the external survey. Internal inspections are conducted to identify damage to or corrosion in the pipeline using a high-resolution inspection tool (a.k.a. a smart pig) approved by BSEE.

The POCSR conducts an in-depth review of pipeline inspection reports, analyzes the report findings and compares results with those from previous inspections. Following this review, BSEE determines whether additional information, follow-up inspections, repairs, or replacements are needed. Operators must maintain pipelines to provide safe and pollution-free transport of produced oil and gas without unduly interfering with other users of the OCS and are required to submit any necessary corrective action plans along with the pipeline inspection reports.

The POCSR requires that the ocean surface above the pipeline route be inspected for leakage a minimum of once every week by boat or aircraft. The records of these inspections with the dates, methods, and results are submitted to the POCSR annually by April 1. Additionally, BSEE inspectors traveling to and from the platforms routinely scan for visible oil sheens and provide an immediate report for further investigation as appropriate.

Pipeline Leak Detection:

BSEE regulations also require that pipeline safety devices be properly installed, maintained and operated. All departing pipelines receiving production from production facilities must be protected by high- and low-pressure sensors that shut in all production facilities when pressures deviate from the

normal operating pressure range. All incoming pipelines boarding a production platform must be equipped with an automatic shutdown valve immediately upon boarding the platform. The shutdown valve must be connected to the emergency shut-in system.

Pursuant to 30 CFR 250.1004(b)(5), all oil pipelines in the POCSR are required to be equipped with a leak detection system (LDS). The LDS is a metering system that provides continuous volumetric comparison between the pipeline's product input and output to leaks from the pipeline are detected as soon as possible. The system includes alarms and adequate sensitivity to detect variations between input and discharge volumes. BSEE periodically initiates and/or witness tests of an operating LDS.

Agency Coordination:

Because pipelines can cross from Federal to State waters, and on to County lands, many POCSR pipelines cross multiple jurisdictions and are subject to regulatory requirements of multiple Federal, State, and local agencies. The agencies with primary regulatory authority over POCSR pipelines include:

- DOI, Bureau of Safety and Environmental Enforcement
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (formally Office of Pipeline Safety), Western Region
- California State Lands Commission
- County of Santa Barbara
- County of Ventura
- City of Carpinteria
- City of Long Beach

Each agency has imposed inspection requirements on POCSR pipelines in accordance with their respective jurisdictional authorities, responsibilities and interests. In recognition of each of the agencies' respective regulatory responsibilities, the agencies agreed that a Memorandum of Agreement (MOA) was needed to assure coordination and consultation during the implementation of regulatory requirements, to facilitate comparable regulatory requirements development for all offshore pipelines, and to avoid conflict and unnecessary duplication.

In 1999, Federal and State agencies signed an MOA to implement the Offshore California Pipeline Inspection Survey (OCPIS) Plan process and procedures. The OCPIS Plan provides a coordinated analytical framework for assessing the present condition and inspection needs of offshore pipelines. The County of Santa Barbara and other local governments are not part of the MOA; however, they coordinate with the included agencies when there are pipeline issues.

Spill Preparedness:

The Oil Spill Preparedness Division of BSEE maintains a program through its Pacific OSP Section of conducting multiple Government Initiated Unannounced Spill Exercises (GIUE) every year – exercises that ultimately cover all operators with offshore exploration and production facilities in California. This is in addition to the required annual exercise each company must conduct on its own that also encompasses training of spill management team members and contracted Oil Spill Response Organizations. The GIUEs focus on the company's ability to properly utilize its approved Oil Spill

Response Plan and respond appropriately to a simulated incident, including pipeline leaks and failures. In the case of scenarios involving pipeline leaks, the exercises serve to test how a company will quickly secure the source of the spill, isolate sections of the pipeline to minimize spillage, deploy pollution domes to capture releasing oil, and effect rapid repairs to the pipeline.

OSPD GIUEs are conducted in collaboration with the other regulating agencies such as the U.S. Coast Guard who serve as the designated Federal On-Scene Coordinator, California Department of Fish and Wildlife's Office of Spill Prevention and Response environmental scientists as well as a Warden to fill the State On-Scene Coordinator role, and sometimes a representative of DOT Pipeline and Hazardous Materials Safety Administration.

ⁱ **Rectifiers:**

A rectifier is an electrical device that changes alternating current (ac) into direct current (dc). The current is impressed on the metal pipeline to protect it against corrosion.

ⁱⁱ **Anodes:**

Sacrificial anodes are metals that react quickly or strongly with other substances and are used to prevent corrosion of a less active material. The anodes are created from a metal alloy with a more negative electrochemical potential than the metal they are used to protect, such as the metal in a pipeline wall.

ⁱⁱⁱ **Close-interval cathodic protection survey:**

A close-interval cathodic protection survey, also known as a potential gradient survey, is a method for assessing the effectiveness of a pipeline's cathodic protection system. Cathodic protection uses an electric current to control corrosion. The survey measures the difference in potential (voltage) between the pipeline and its surroundings at intervals throughout the length of the pipeline.