What the Regulations Require and How Decommissioning Differs Between the Pacific and Gulf of Mexico

LSU Journal of Energy Law and Resources
Decommissioning Symposium
February 15, 2019
Agenda

- Offshore Federal Jurisdiction
- Offshore Well, Platforms and Pipelines
- Decommissioning Obligations & Regulations
- Gulf of Mexico & Pacific OCS Regions
- Idle Iron
- Decommissioning Project Execution
- Rigs to Reef Decommissioning Option
- Final Results
- Questions
Offshore Federal Jurisdiction
Government Controlled Offshore Lands
United States - Exclusive Economic Zone

(3 Billion Acres - 4.1 Million Sq. Miles)
Offshore Jurisdiction

Source: Dept. of Interior

Foot of Slope
1 nautical mile (nmi) = 6076.105 American Survey ft. or 1852.0 meters
(Except for LA 6080.2 ft.)

Source: DOI
Offshore Wells, Platforms and Pipelines
Shallow Water

Three Pile Platform

Multi-Platform Complex
Deepwater Semi-Submersible Production Platform
Deepwater Production System Layout

Deep Draft Semi-Submersible Facility with Subsea Wells

Field 1

Field 2
Decommissioning Obligations and Regulations
Decommissioning Obligations

- Decommissioning is the process of ending offshore oil and gas operations at an offshore platform and returning the ocean and seafloor to its pre-lease condition.

- The Outer Continental Shelf Lands Act (OCSLA) and implementing regulations establish *decommissioning obligations to which an operator must commit when they sign an offshore lease* under the OCSLA, including the requirement to apply for and obtain a permit for subsequent removal of platforms.

- Outer Continental Shelf leases typically require the operator to remove seafloor obstructions, such as offshore platforms, within one year of lease termination, or prior to termination of the lease if either the operator or the Department of the Interior deems the structure unsafe, obsolete, or no longer useful for operations (Idle Iron).
Sec. 22. Decommissioning.

a) When wells, platforms, pipelines or other facilities are no longer useful for operations, the Lessee shall permanently plug such wells, remove such platforms and other facilities, decommission such pipelines, and clear the seafloor of all associated obstructions created by the lease operations.

b) The Secretary may determine that a well, platform, pipeline or other facility is no longer useful and require its immediate decommissioning.

c) All platforms and other facilities shall be removed within 1 year after the lease terminates unless the Lessor grants approval to conduct other activities.

d) All decommissioning operations shall be conducted in accordance with applicable laws and regulations and in a manner that is safe, does not unreasonably interfere with other uses of the OCS, and does not cause undue or serious harm or damage to the human, marine, or coastal environment.
Decommissioning Obligations

The OCSLA regulatory and lease requirements for decommissioning offshore platforms are designed to minimize the environmental and safety risks inherent in leaving unused structures in the ocean, and to reduce the potential for conflicts with other users of the Federal OCS (i.e., commercial fishing/aquaculture, military activities, transportation industry, other oil and gas/renewable energy operations, etc.).

Decommissioning an offshore platform generally entails:

- Plugging all wells supported by the platform and **severing the well casings 15 feet below the mudline**;
- Cleaning and removing all production and pipeline risers supported by the platform; Removing the platform from its foundation by **severing all bottom-founded components at least 15 feet below the mudline**;
- Disposing the platform in a scrap yard or fabrication yard, or placing the platform jacket at an artificial reef site; and
- **Performing site clearance verification** at the platform location or subsea production center(s) to ensure that no debris or potential obstructions to other users of the OCS remain.

Source: BSEE
Bureau of Safety and Environmental Enforcement (BSEE)

- The BSEE is responsible for overseeing the decommissioning of any well, facilities, pipelines and other equipment installed offshore in federal waters supporting energy development.

- BSEE identifies decommissioning as the process of ending oil, gas, or sulphur operations and returning the lease or pipeline right-of-way to a condition specified by regulatory requirements.

- The BSEE works to ensure that obsolete structures and components are cleared from the site to prevent use conflicts. To avoid release of hydrocarbons to the environment, wells are plugged and cut below the mud line and pipelines removed or internally cleaned and prepared for abandonment in place.

- The BSEE supports and encourages the reuse of obsolete offshore petroleum structures as artificial reefs in US waters as long as the structure does not pose an unreasonable impediment to future mineral development and other OCS use.
  - Reuse must comply with the artificial reef permitting requirements of the Corps of Engineers and the criteria in the National Artificial Reef Plan.
  - The state agency responsible for managing marine fisheries resources must accept liability for the structure before BSEE will release the Federal lessee from lease obligations.
Decommissioning Compliance

- BSEE requires that operators obtain approval of the platform removal methodology prior to removal of the platform through an application process.
- To satisfy National Environmental Policy Act (NEPA) obligations, the Bureau of Ocean Energy Management (BOEM) prepares a site-specific environmental assessment/environmental impact statement for each removal application on behalf of BSEE.
- BSEE ensures any environmental assessment is adequate and imposes any necessary protective mitigation measures as conditions of permit approval.
§ 250.1701 Who must meet the decommissioning obligations in this subpart?

(a) *Lessees and owners of operating rights are jointly and severally responsible for meeting decommissioning obligations* for facilities on leases, including the obligations related to lease-term pipelines, as the obligations accrue and until each obligation is met.

(b) *All holders of a right-of-way are jointly and severally liable for meeting decommissioning obligations* for facilities on their right-of-way, including right-of-way pipelines, as the obligations accrue and until each obligation is met.
§ 250.1702 When do I accrue decommissioning obligations?

You accrue decommissioning obligations when you do any of the following:

a) Drill a well;

b) Install a platform, pipeline, or other facility;

c) Create an obstruction to other users of the OCS;

d) Are or become a lessee or the owner of operating rights of a lease on which there is a well that has not been permanently plugged according to this subpart, a platform, a lease term pipe-line, or other facility, or an obstruction;

e) Are or become the holder of a pipeline right-of-way on which there is a pipeline, platform, or other facility, or an obstruction; or

f) Re-enter a well that was previously plugged according to this subpart
§ 250.1703 What are the general requirements for decommissioning?

When your facilities are no longer useful for operations, you must:

a) Get approval from the appropriate District Manager before decommissioning wells and from the Regional Supervisor before decommissioning platforms and pipelines or other facilities;

b) Permanently plug all wells. Permanently installed packers and bridge plugs must comply with API Spec. 11D1 (as incorporated by reference in § 250.198);

c) Remove all platforms and other facilities, except as provided in §§ 250.1725(a) and 250.1730.

d) Decommission all pipelines;

e) Clear the seafloor of all obstructions created by your lease and pipeline right-of-way operations;

f) Follow all applicable requirements of subpart G of this part; and

g) Conduct all decommissioning activities in a manner that is safe, does not unreasonably interfere with other uses of the OCS, and does not cause undue or serious harm or damage to the human, marine, or coastal environment.
Decommissioning Regulations (cont.)

$ 250.1716$ To what depth must I remove wellheads and casings?

a) Unless the District Manager approves an alternate depth under paragraph (b) of this section, you must remove all wellheads and casings to at least 15 feet below the mud line.

b) The District Manager may approve an alternate removal depth if:

1. The wellhead or casing would not become an obstruction to other users of the seafloor or area, and geotechnical and other information you provide demonstrate that erosional processes capable of exposing the obstructions are not expected; or
2. You determine, and BSEE concurs, that you must use divers, and the seafloor sediment stability poses safety concerns; or
3. The water depth is greater than 800 meters (2,624 feet).
§ 250.1725 When do I have to remove platforms and other facilities?

- You must remove all platforms and other facilities within 1 year after the lease or pipeline right-of-way terminates, unless you receive approval to maintain the structure to conduct other activities. Platforms include production platforms, well jackets, single-well caissons, and pipeline accessory platforms.

§ 250.1728 To what depth must I remove a platform or other facility?

a) Unless the Regional Supervisor approves an alternate depth under paragraph (b) of this section, you must remove all platforms and other facilities (including templates and pilings) to at least 15 feet below the mud line.

b) The Regional Supervisor may approve an alternate removal depth if:

1) The remaining structure would not become an obstruction to other users of the seafloor or area, and geotechnical and other information you provide demonstrate that erosional processes capable of exposing the obstructions are not expected; or

2) You determine, and BSEE concurs, that you must use divers and the seafloor sediment stability poses safety concerns; or

3) The water depth is greater than 800 meters (2,624 feet).
§ 250.1740 How must I verify that the site of a permanently plugged well, removed platform, or other removed facility is clear of obstructions?

Within 60 days after you permanently plug a well or remove a platform or other facility, you must verify that the site is clear of obstructions by using one of the following methods:

1. For a well site, you must either:
   a) Drag a trawl over the site;
   b) Scan across the location using sonar equipment;
   c) Inspect the site using a diver;
   d) Videotape the site using a camera on a remotely operated vehicle (ROV); or
   e) Use another method approved by the District Manager if the particular site conditions warrant.

2. For a platform or other facility site in water depths less than 300 feet, you must drag a trawl over the site.

3. For a platform or other facility site in water depths 300 feet or more, you must either:
   a) Drag a trawl over the site;
   b) Scan across the site using sonar equipment; or
   c) Use another method approved by the Regional Supervisor if the particular site conditions warrant.
§ 250.1750 When may I decommission a pipeline in place?

You may decommission a pipeline in place when the Regional Supervisor determines that the pipeline does not constitute a hazard (obstruction) to navigation and commercial fishing operations, unduly interfere with other uses of the OCS, or have adverse environmental effects.

§ 250.1752 How do I remove a pipeline?

Before removing a pipeline, you must:

a) Submit a pipeline removal application in triplicate to the Regional Supervisor for approval. Your application must be accompanied by payment of the service fee listed in § 250.125. Your application must include the following information:
   1) Proposed removal procedures;
   2) If the Regional Supervisor requires it, a description, including anchor pattern(s), of the vessel(s) you will use to remove the pipeline;
   3) Length (feet) to be removed;
   4) Length (feet) of the segment that will remain in place;
   5) Plans for transportation of the removed pipe for disposal or salvage;
   6) Plans to protect archaeological and sensitive biological features during removal operations, including a brief assessment of the environmental impacts of the removal operations and procedures and mitigation measures that you will take to minimize such impacts; and
   7) Projected removal schedule and duration.

b) Pig the pipeline, unless the Regional Supervisor determines that pigging is not practical; and

c) Flush the pipeline
Gulf of Mexico OCS Region
### BOEM Gulf of Mexico OCS Region
Blocks and Active Leases by Planning Area
February 1, 2019

![Map of Gulf of Mexico OCS Region with Planning Areas]

<table>
<thead>
<tr>
<th>Planning Areas</th>
<th>Total Blocks</th>
<th>Total Acres</th>
<th>Number of Leases</th>
<th>Acres Leased</th>
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*CPA and EPA contain 648 shared blocks. These blocks are given both a CPA and EPA designation in the data which may account for a higher block total.*

Source: BOEM
### Gulf of Mexico Region Statistics

<table>
<thead>
<tr>
<th>Water Depth in Meters</th>
<th>Active Leases</th>
<th>Approved Applications to Drill</th>
<th>Active Platforms</th>
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<tr>
<td>801 to 1000</td>
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<td>Above 1000</td>
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<td><strong>Total</strong></td>
<td><strong>2562</strong></td>
<td><strong>41698</strong></td>
<td><strong>1866</strong></td>
</tr>
</tbody>
</table>

Total Number of Wells Drilled - 53380  
Total Number of Producing Wells - 10000+/−  
Miles of Active Pipelines - 13135  
Current Operators - 101

Source: BSEE
Department of the Interior Outer Continental Shelf Oil and Gas Program Pacific Region

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<td>Acres in Region</td>
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<tr>
<td>Active Leases</td>
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<tr>
<td>Acres Leased</td>
<td>188,869</td>
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<tr>
<td>Wells Drilled</td>
<td>1,607</td>
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<td>Platforms</td>
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<td>Pipeline Miles</td>
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<tr>
<td>Current Operators</td>
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</table>

Source: DOI
Southern California Planning Area Platform Location Index Map

Source: BOEM
Pacific OCS Region - First Platforms to be Decommissioned

- BSEE Pacific Region personnel currently oversee 23 oil and gas platforms on 38 active leases located in federal waters offshore southern California.

- Two of these platforms, Gail and Grace, operated by Beacon West Energy Group, LLC (Designated Agent for Decommissioning Purposes by Chevron U.S.A. Inc.), are currently in the beginning stages of the decommissioning process.

- Freeport McMoRan Oil and Gas LLC (FMOGLLC), has begun decommissioning activities associated with three platforms, Hidalgo, Harvest and Hermosa. FMOGLLC has started their well plugging campaign on platform Hidalgo. Chevron will decommission the structures once FMOGLLC completes their decommissioning activities.
## Gulf of Mexico Region vs. Pacific Region

<table>
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<th>Category</th>
<th>Gulf of Mexico Region</th>
<th>Pacific Region</th>
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<td>Wells Drilled</td>
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<td>208</td>
</tr>
<tr>
<td>Current Operators</td>
<td>101</td>
<td>6</td>
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</table>
Idle Iron
Idle Iron Decommissioning Guidance for Wells and Platforms (NTL No. 2018-G03)

- Effective December 11, 2018, BSEE published a new Idle Iron NTL superseding and streamlining their previously issued guidance under Idle Iron NTL (No. 2010-G05) issued on September 15, 2010.

- Idle infrastructure poses a potential threat to the Outer Continental Shelf (OCS) environment and potential financial liabilities if destroyed or damaged in a future event, such as a hurricane. The cost and time to permanently plug wells and remove storm-damaged infrastructure is significantly higher than decommissioning assets that have not been damaged as of the time of decommissioning.

- Pursuant to 30 CFR 250.1711 BSEE has the authority to order you to permanently plug a well if it poses a hazard to safety or the environment, or is not useful for lease operations and is not capable of oil, gas, or sulphur production in paying quantities.

- January 2018 (Gulf of Mexico) - 235 Idle Wells & 239 Idle Platforms on active leases

Source: BSEE
Decommissioning Project Execution
OCS Decommissioning Programs

**Gulf of Mexico OCS**
- Lease termination
- BSEE submittals:
  - Application for permit to modify - plug wells
  - Platform abandonment permit
  - Pipeline abandonment permit
  - Etc.
- NEPA Compliance
  - Environmental Impact Statements
  - Environmental Assessments
- Rigs to Reef Option

**Pacific OCS**
- Lease termination
- BSEE submittals:
  - Decommissioning Plan
  - Application for permit to modify - plug wells
  - Platform abandonment permit
  - Pipeline abandonment permit
  - Etc.
- NEPA Compliance
  - Environmental Impact Statements
    - Programmatic
    - Site-specific
  - Environmental Assessments
  - Categorical Exclusions
- Rigs to Reef Option
Shallow Water Platform Removal
Shallow Water Platform Removal
Shallow Water Platform Removal
Shallow Water Platform Removal
Shallow Water Platform Removal
Shallow Water Platform Removal

Swing Jacket Back To Starboard Side To Trim Leg Piles
Shallow Water Platform Removal
Shallow Water Platform Removal
Shallow Water Platform Removal

EI 74-A Platform Site Marked By Abandonment Buoy
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Typical Jacket Cut/Removal Plan Piece by Piece
Typical Jacket Cut/Removal Plan - Every Level/Section Removed Piece by Piece
Rigs to Reef Decommissioning Option
What is Rigs to Reef?

Rigs-to-Reef is a process, managed by Federal and State agencies, by which operators choose to donate - rather than scrap - decommissioned oil and gas platforms to coastal States to serve as artificial reefs under the National Artificial Reef Plan.

Decommissioned structures are typically (1) toppled in place, (2) partially removed near the surface, or (3) towed to existing reef sites or reef planning areas.

The decommissioned platforms, like artificial reefs and natural hard surfaces underwater, attract various encrusting organisms such as barnacles and bivalves which colonize on them and, in turn, attract fish and other marine life as found on natural reefs.

Source: BSEE
What is the Department of the Interior’s Rigs-to-Reefs Policy?

- The Department of the Interior’s Rigs-to-Reefs policy encourages the reuse of obsolete oil and gas facilities as artificial reefs and describes the conditions under which DOI would waive OCSLA platform removal requirements. *The decision to pursue donation of a decommissioned platform to a coastal State under the Rigs-to-Reefs process is optional and completely at the discretion of the lessee.* The Department’s Rigs-to-Reefs policy is implemented by BSEE and BOEM, which administer different provisions of the OCSLA.

- These platform removal waiver conditions include:
  1. The structure must become part of a State artificial reef program that complies with the criteria in the National Artificial Reef Plan
  2. The appropriate State agency acquires a Rivers and Harbors Act section 10 permit from the U.S. Army Corps of Engineers and accepts title and liability for the reefed structure once removal and reefing operations are concluded
  3. The reefing proposal complies with BSEE Regional Engineering, Stability, and Environmental Reviewing Standards and Reef-Approval Guidelines, as well as consistent with the best management practices and cleanup standards in national guidance prepared by EPA and the Maritime Administration regarding the preparation of vessels intended for use as artificial reefs
  4. The operator satisfies U.S. Coast Guard navigational safety requirements
  5. The structure does not pose an unreasonable impediment to future mineral and energy development.
§ 250.1730 When might BSEE approve partial structure removal or toppling in place?

The Regional Supervisor may grant a departure from the requirement to remove a platform or other facility by approving partial structure removal or toppling in place for conversion to an artificial reef if you meet the following conditions:

a) The structure becomes part of a State artificial reef program, and the responsible State agency acquires a permit from the U.S. Army Corps of Engineers and accepts title and liability for the structure; and

b) You satisfy any U.S. Coast Guard (USCG) navigational requirements for the structure.
Traditional Offshore Platform Major Components

Deck(s) or Topsides

Jacket

Water Surface

Sea Floor
The partial removal platform reefing method

Source: BSEE
The topple-in-place platform reefing method

Source: BSEE
States Approved Rigs-to-Reefs Programs

- As of September 2012, the *States of Louisiana, Texas, Mississippi, and California* have passed specific legislation to establish programs for building artificial reefs from oil and gas platforms.

- The *Louisiana Department of Wildlife and Fisheries, the Texas Parks and Wildlife Department, and the Mississippi Department of Marine Resources* have administered *State artificial reef plans*, including ongoing offshore Rigs-to-Reefs programs. The artificial reef coordinators from these States assess the interest of their respective States in acquiring oil or gas structures offered for artificial reef development, work with the structure operator (or agent) in securing any permit required under statutes administered by the U.S. Army Corps of Engineers (including Section 10 of the Rivers and Harbors Act), negotiate an agreement for a structure donation, and accept title and responsibility on behalf of the State for the structure as a permanent State-approved artificial reef.
California’s Artificial Reef Program was created by passage of AB 2503 in 2010
- Under the legislation the California Department of Fish & Wildlife (CDFW) was directed to design an application process for the program
- The legislation contained minimal guidance on the application requirements. CDFW has not promulgated regulations or designed an application process since enactment of the law
- Absent clarity in regulatory implementation, the existing law creates a high potential for applications to be delayed out of “completeness” concerns
- **The statute requires lessees to retain all liabilities relative to creation of the reef and to indemnify the state**

California Legislature is considering amending the Artificial Reef Program to expand and streamline the guidance stated in the original legislation. Draft legislation was introduced during the ‘15/’16 (SB 233) and ’17/’18 (SB 588) legislative sessions
- Program improvements included in SB 588:
  - Structure provided to environmental review and permitting process; sequence of requirements is more clearly identified
  - Guidance established for defining “net environmental benefit”
  - Program startup costs factored in calculation of cost savings

It is unknown if amending legislation will be reintroduced in 2019
Final Results