LMOGA
OFFSHORE ISSUES
UPDATE

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BSEE Gulf of Mexico Regional Director
28 February 2018

“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”
BSEE Updates

• Regulatory Reform
• GOM Activity
• High Pressure High Temperature Permitting
• Risk-based inspections
• Decommissioning planning
• Other Priorities in 2018
EXECUTIVE ORDER
IMPLEMENTING AN AMERICA-FIRST OFFSHORE ENERGY STRATEGY—

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Outer Continental Shelf Lands Act, 43 U.S.C. 1331 et seq., and in order to maintain global leadership in energy innovation, exploration, and production, it is hereby ordered as follows:

Sec. 2. Policy. It shall be the policy of the United States to encourage energy exploration and production, including on the Outer Continental Shelf, in order to maintain the Nation's position as a global energy leader and foster energy security and resilience for the benefit of the American people, while ensuring that any such activity is safe and environmentally responsible.
Sec. 7. Reconsideration of Well Control Rule. The Secretary of the Interior shall review the Final Rule of the Bureau of Safety and Environmental Enforcement (BSEE) entitled "Oil and Gas and Sulfur Operations in the Outer Continental Shelf-Blowout Preventer Systems and Well Control," 81 Fed. Reg. 25888 (April 29, 2016), for consistency with the policy set forth in section 2 of this order, and shall publish for notice and comment a proposed rule revising that rule, if appropriate and as consistent with law.

The Secretary of the Interior shall also take all appropriate action to lawfully revise any related rules and guidance for consistency with the policy set forth in section 2 of this order. Additionally, the Secretary of the Interior shall review BSEE's regulatory regime for offshore operators to determine the extent to which additional regulation is necessary.
EXECUTIVE ORDER

Presidential Executive Order
Implementing an America-First Offshore Energy Strategy

EXECUTIVE ORDER

DONALD J. TRUMP
THE WHITE HOUSE,
April 28, 2017.
Secretary’s Orders on Energy

*Free industry to discover and produce*

**Order 3349 – American Energy Independence**
- Supports Executive Order signed March 28, 2017
- Directs DOI to review all existing regulations, orders, guidance documents and policies that potentially burden development

**Order 3350 – America-First Offshore Energy Strategy**
- Implements Executive Order signed April 28, 2017
- Directs BSEE to reevaluate the “Well Control Rule”

**Order 3351 – Strengthening the DOI Energy Portfolio**
- Directs BSEE to identify regulatory burdens that unnecessarily encumber energy exploration, development, production transportation; and develop strategies to eliminate or minimize the burdens.
Well Control Rule Review
Development Process for Current WCR

- Review of Deepwater Horizon recommendations (300+)
- Public Forum – May 2012
- Completion of industry standards – November 2012
- Publication of proposed regulations – April 2015
- Final rule published – April 28, 2016
- Implementation over several years
BSEE Regulatory Review

BSEE utilized the following sources of information in reviewing its regulations for potential revision:

- Reviewed BSEE internal policies
- Implementation of the original WCR
- BSEE webpage Q and As
- Review of permitting process
- BSEE WCR public forum (September 20, 2017)
- Comments submitted to BSEE
Well Control Rule Public Forum

Sept. 20, 2017, 1919 Smith Street, Houston, Texas

Goal: To ensure a complete and thorough review of the Well Control Rule with stakeholder input.

Are there potential revisions to the rule that would significantly reduce regulatory burdens without significantly reducing safety and environmental protection on the OCS?

• BSEE accepted both written and oral presentations from interested parties at the forum

• Two sessions were held
General Issues

Major issues raised during the WCR implementation and BSEE public forum:

- Safe drilling margin
- Real-time monitoring
- Accumulator systems
- BSEE Approved Verification Organizations (BAVOs)
- Casing and cementing
Concerns raised with WCR requirements:

- Not able to get pre-approval of margin at well planning stages. Concerns about getting consistent approval in APD
- If no offset well data, concerns about getting approval for lower margin
- Concerns about having to stop and remedy losses while drilling situation – use API bulletin 92L
Concerns raised with WCR requirements:

- The potential for an increase in rig personnel response time and a decrease in the accountability of the offshore personnel

- Concerns about the meaning of proposed requirements to “immediately transmit” these RTM data and to maintain “continuous contact” between onshore personnel and rig personnel

- Requires RTM centers
Concerns raised with WCR requirements:

- The increased number and weight of accumulator bottles could cause structural concerns for the BOP frame and the rig (especially for additional dedicated subsea bottles for deadman/autoshear functions)

- Costs associated with the additional bottles would be significant

- Additional system modifications such as open function for ROV provides additional points for potential leaks
Concerns raised with WCR requirements:

- Redundant with current independent 3rd parties
- Increased compliance costs to use a BAVO
- Oversight of BAVO operations
- Unsure of what to expect
Concerns raised with WCR requirements:

- Concerns about the use of centralizers and should just reference API standard 65-2
- Concerns about indications of an inadequate cement job and taking appropriate actions to determine adequacy.
- Concerns about applying API spec 11D1 to all packers or bridge plugs
Production Safety Systems Rule
Subpart H – Scope Clarification

- Media reports have confused the Production Safety System Rule (PSSR) with other oil and gas regulations
- The PSSR was not updated due the Deepwater Horizon incident, requirements updated due to that event are outside of the scope of the PSSR
- The opening of new federal leases in the Atlantic, Pacific, and Alaskan waters are not within the scope of the PSSR
Subpart H – Departures

• Industry needed more time to comply with certain regulations contained within the 2016 update to Subpart H
• Departures were given to certain regulations to allow production operations to continue in the Gulf of Mexico
Subpart H – Departures Granted

- 5 current regulations have active departures
  - 250.842 – PE Stamping of Drawings
  - 250.872(a) – Chemical tanks with Class 1 liquids must comply with API 14C
  - 250.872(b) – Level Safety High (LSH) must be installed to sense the level in the oil bucket
  - 250.880(c)(2)(i) – PSVs must be tested annually. The piston must lift during this test
  - 250.880(c)(3)(iii) – Flame arrestors must be visually inspected annually
Subpart H – Departures Granted

Number of Platforms with a departure

- 250.842 Drawings
- 250.872(a) Chemical Tanks
- 250.872(b) LSH in Oil Bucket
- 880(c)(2)(i) PSVs
- 880(c)(3)(iii) Flame Arrestors
Subpart H – Departures

Proposed changes to regulations with departures

• Currently 2 of the 5 regulations that departures have been granted for have proposed changes
  • 250.842 is proposed to be changed to reduce the amount of drawings that require a PE stamp
  • 250.872(b) is proposed to grandfather in existing vessels

• The other 3 regulations were only a problem because operators needed appropriate time to comply
Gulf of Mexico Activity
Drilling Rigs in US Gulf of Mexico

- Platform Rig = 12
- Semi-submersible = 5
- Jack-up rig = 7
- Drillship = 19
Production Facilities

**Shallow Water Production Facilities** (less than 500 ft)
- Single Caisson
- 4 Pile Caisson

**Deepwater Production Facilities** (greater than 500 ft)
- SPAR
- TLP
- FPSO

1951 vs. 76
### Projects with Final Investment Decisions (FID)

<table>
<thead>
<tr>
<th>Deepwater GOM</th>
<th>Operator</th>
<th>Area</th>
<th>Type</th>
<th>Water (ft.)</th>
<th>First</th>
<th>Gas Capacity (MMscfpd)</th>
<th>Oil Capacity (Mbopd)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Projects</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Big Foot</td>
<td>Chevron</td>
<td>WR029</td>
<td>TLP</td>
<td>5,200</td>
<td>2018</td>
<td>25.0</td>
<td>75.0</td>
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<tr>
<td>Stampede</td>
<td>Hess</td>
<td>GC468</td>
<td>TLP</td>
<td>3,500</td>
<td>2018</td>
<td>60.0</td>
<td>80.0</td>
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<tr>
<td>Appomattox</td>
<td>Shell</td>
<td>MC392</td>
<td>Semi</td>
<td>7,200</td>
<td>2020</td>
<td>100.0</td>
<td>150.0</td>
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<tr>
<td>Mad Dog Phase 2</td>
<td>BP</td>
<td>GC825</td>
<td>Semi</td>
<td>5,000</td>
<td>2021</td>
<td>25.0</td>
<td>110.0</td>
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<tr>
<td><strong>Subsea Tiebacks</strong></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>300</td>
<td>240</td>
</tr>
</tbody>
</table>

**Potential Activity**

- Potential Floating Platforms 4-9 yrs out 400 500
- Subsea Tiebacks to existing platforms 2-5 yrs out 480 400

Timeline from Lease Date to First Production:
- Lease date to Initial Discovery Date – 5 year average
- Discovery date to Final Investment Decision – 5 year average
- FID to First Production (construction & installation) – 3 year average

*For larger and more complex projects, the timeline can be longer*
Gulf of Mexico OCS Oil Production
Total vs. Deepwater
Risk Based Inspections
Risk Based Inspections

Facility Based Risk Inspections - Based on analysis of low probability, high consequence areas of a specific facility

Performance Based Risk Inspections - Based on analysis of Key Performance Indicators and utilizing Trend Analysis to focus on reducing likelihood of events and compliance issues Gulf wide

Annual Production Facility Inspections and Monthly Well Operation Inspections - Based on OCS mandate for inspections, Regional policy. Includes Follow-up on specific facility based on Increased Oversight Identification
### Performance Based Risk Inspection

#### Gas Releases

<table>
<thead>
<tr>
<th>Equipment &amp; Factors Involved in the Gas Releases</th>
<th>Number of Occurrences</th>
<th>Percent of Gas Releases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other/Unclear</td>
<td>15</td>
<td>22%</td>
</tr>
<tr>
<td>Flotation cell/wemco/water treating</td>
<td>14</td>
<td>21%</td>
</tr>
<tr>
<td>Vessel hatches</td>
<td>12</td>
<td>18%</td>
</tr>
<tr>
<td>Compressor related</td>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>Human Factors</td>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>Wellhead/wellbay/valves</td>
<td>8</td>
<td>12%</td>
</tr>
<tr>
<td>Fuel Gas</td>
<td>8</td>
<td>12%</td>
</tr>
<tr>
<td>(nonwater) Filters or Separators</td>
<td>8</td>
<td>12%</td>
</tr>
<tr>
<td>PSV/relief devices</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>Corrosion</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td>Generators/tubines</td>
<td>2</td>
<td>3%</td>
</tr>
</tbody>
</table>

Percentages do not add up to 100% because some incidents are associated with multiple factors.
Gas Release PBRI – Findings

- Seventeen (17) percent of the facilities involved in the PBRI had documented oil or gas accumulation.

- Eight (8) of the thirty six (36) PBRI facilities, or 22-percent, had a non-operable gas detector, no process implemented for calibrating devices, failed a bump test, or had no documentation on the frequency / results of inspections.

- The facilities associated with the Gas Release PBRI had no issues identified by BSEE staff on excessive temperatures. In fact, most observations made by inspectors indicated high temperature areas were well insulated and out of human reach.
High Pressure
High Temperature
(HPHT)
Prospects
or
The Next Frontier
BSEE believes that the deployment of high pressure and high temperature (HPHT) equipment is a high risk activity with high consequences for failure. These activities require a higher level of scrutiny to insure that BSEE accomplishes their primary responsibility of protecting people and the environment and to conserve resources on the Outer Continental Shelf.
Code of Federal Regulations for HPHT Projects

• 30 CFR 250.807 - Additional requirements for subsurface safety valves and related equipment installed in high pressure high temperature (HPHT) environments

• (a)(1) Design Verification Analysis
  • (a)(2) Design Validation Testing

• (b) HPHT is greater than 15,000 psi or 350°F
Decommissioning Planning

Rigs to Reefs Program

- FY17 - 27 permits approved that proposed converting decommissioned structures into artificial reefs; 16 have been reefed
  - Fieldwood – 9
  - W&T - 5

- Last 5 years-128 platforms have been approved for the program in the Gulf of Mexico
Decommissioning Planning

Areas of Concern

- Backlog of facilities and wells that need to be removed on expired and active leases (idle iron) still needs to be addressed.

- Bankruptcies have caused some decommissioning liabilities [facilities and wells] to become uncovered (no financial assurance in place and/or no co lessee or prior lessee).
Other BSEE 2018 Focus Areas

- Well intervention
- Subsea leak detection
- Royalty policy
- Support to BOEM leasing draft proposed program
BSEE Website: www.bsee.gov

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