4310-VH

DEPARTMENT OF THE INTERIOR

Bureau of Safety and Environmental Enforcement

30 CFR Part 250

[Docket ID: BSEE-2018-0002; 190E1700D2 ET1SF0000.EAQ000 EEEE500000]

RIN 1014–AA39

Oil and Gas and Sulfur Operations in the Outer Continental Shelf—Blowout Preventer Systems and Well Control Revisions

AGENCY: Bureau of Safety and Environmental Enforcement, Interior.

ACTION: Final rule.

SUMMARY: The Bureau of Safety and Environmental Enforcement (BSEE) is revising existing regulations for well control and blowout preventer systems. This final rule revises requirements for well design, well control, casing, cementing, real-time monitoring (RTM), and subsea containment. These revisions modify regulations pertaining to offshore oil and gas drilling, completions, workovers, and decommissioning in accordance with Executive and Secretary of the Interior's Orders to ensure safety and environmental protection, while correcting errors and reducing certain unnecessary regulatory burdens imposed under the existing regulations. Accordingly, after thoroughly reexamining the 2016 Blowout Preventer Systems and Well Control final rule (WCR), experiences from the implementation process, and various BSEE policies (notices to lessees, answers to frequently asked questions, and conditions of approval), BSEE will amend, revise, or remove certain current regulatory provisions that create unnecessary burdens on stakeholders, while still maintaining safety and environmental

protection. The final regulations also address various issues and errors that BSEE identified during the implementation of the 2016 WCR.

DATES: This final rule becomes effective on [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. BSEE will defer compliance with certain provisions of the final rule, however, until the times specified in those provisions and as described in Section II of this preamble.

The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: For technical questions contact Fred Brink, Gulf of Mexico Region (GOMR) District Operations Support, (504) 736-2400, or by email: OMM_DFO_DOS@bsee.gov; for procedural questions contact Kirk Malstrom, Regulations and Standards Branch, (202) 258-1518, or by email: regs@bsee.gov.

SUPPLEMENTARY INFORMATION:

Executive Summary:

In the immediate aftermath of the *Deepwater Horizon* incident in 2010, BSEE adopted several recommendations from multiple investigation teams, and promulgated multiple rulemakings including the Drilling Safety Rule (Oct. 2010), Safety and Environmental Management Systems (SEMS) I (Oct. 2010), and SEMS II (April 2013), in order to improve the safety of offshore operations. Subsequently, BSEE published the Blowout Preventer Systems and Well Control final rule (the WCR) on April 29, 2016. The 2016 WCR consolidated the equipment and operational requirements for well control into one part of BSEE’s regulations; enhanced blowout preventer (BOP), well design, and well-control requirements; and incorporated certain industry consensus standards. Most of the 2016 WCR provisions became effective on July 28, 2016.

Although the 2016 WCR addressed a significant number of issues that were identified during the analysis of the *Deepwater Horizon* incident, BSEE recognized that BOP equipment and systems continue to improve technologically and well control processes also evolve. In 2017, Congress also encouraged BSEE to:

> evaluate information learned from additional stakeholder input and ongoing technical conversations to inform implementation of this rule. To the extent additional information warrants revisions to the rule that require public notice and comment, the Bureau is encouraged to follow that process to ensure that offshore operations promote safety and protect the environment in a technically feasible manner.[1]

Additionally, since the WCR became effective in 2016, BSEE has continued to engage with the offshore oil and gas industry, Standards Development Organizations (SDOs), and other stakeholders. During the course of these engagements, BSEE identified areas for regulatory improvement and stakeholders expressed a variety of concerns regarding the implementation of the 2016 WCR. For instance, oil and natural gas operators raised concerns about certain regulatory provisions that they assert impose undue burdens on their industry, but do not significantly enhance worker safety or environmental protection (*e.g.*, how real time monitoring is monitored and utilized onshore; a strictly enforced 0.5 pounds per gallon (ppg) drilling margin; requirements that may be inconsistent with American Petroleum Institute (API) Standard 53; and requirements for certain BSEE approvals during cementing operations that result in

[1] See n. 10, supra.

unnecessary delay). Other stakeholders suggested that certain regulatory requirements do not properly account for advances or limitations in technology and processes. Further, BSEE received numerous questions regarding the proper interpretation and application of provisions viewed to be unclear or ambiguous, requiring BSEE to provide substantial informal guidance regarding the terms of the 2016 WCR. BSEE posted approximately 100 responses to questions regarding the 2016 WCR provisions on the BSEE webpage at https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule.

Accordingly, after thoroughly reexamining the 2016 WCR, experiences from the implementation process, and BSEE policy, BSEE is amending, revising, or removing current regulatory provisions that create unnecessary burdens on stakeholders while still maintaining safety and environmental protection. On May 11, 2018, BSEE published in the *Federal Register* a proposed rule to revise certain provisions of the 2016 WCR (83 FR 22128) (the "proposed rule") and to solicit comments on several additional issues. In response to the proposed rule, BSEE received over 265 sets of comments containing individually submitted comments and multiple similar group form letters, totaling over 118,000 submittals. Comments included submittals from individual entities (*e.g.*, companies, industry organizations, non-governmental organizations, State governments, and private citizens). All relevant comments are posted at the *Federal eRulemaking* portal: *http://www.regulations.gov.* To access the comments at that website, enter BSEE–2018–0002 in the Search box. The final regulatory changes reflect BSEE's consideration of the public comments received on both the 2016 WCR and the proposed rule, and stakeholders' recommendations pertaining to the requirements applicable to offshore oil and gas drilling, completions, workovers, and decommissioning. This rule revises regulatory provisions in 30 CFR Part 250, Subparts A, B, D, E, F, G, and Q on topics such as, but not limited to:

Notifications and submittals to BSEE;

Drilling margins;

Lift boats;

Real-time monitoring;

BSEE Approved Verification Organizations (BAVOs);

Accumulator systems;

BOP and control station testing;

Coiled tubing; and

Mechanical barriers (packers and bridge plugs).

BSEE utilized the best available data to analyze the economic impacts of the final changes. That analysis indicates that the estimated overall economic impact will benefit the industry over the next 10 years because of the reduction in compliance costs, in addition to increased regulatory certainty. As this rule maintains safety and environmental protection, the entities realizing savings from these changes can deploy them for other, more productive purposes, *e.g.*, additional capital investment. Increased productivity and competiveness of domestic energy projects benefit consumers and the broader U.S. economy.

In keeping with recent Executive and Secretary's Orders, BSEE undertook a review of the 2016 WCR with a view toward the policy direction of encouraging energy exploration and production on the Outer Continental Shelf (OCS) and reducing unnecessary regulatory burdens, while ensuring that any such activity is safe and environmentally responsible. BSEE carefully reviewed all 342 provisions of the 2016 WCR, and determined that this final rule revises or adds to 71 provisions of the 2016 WCR -- or approximately 20% of the 2016 WCR provisions. The regulations will still contain the core safety and environmental protective provisions of the 2016 WCR. In the process, BSEE compared each of the changes to the 424 recommendations arising from 26 separate reports from 14 different organizations developed in the wake of and in response to the *Deepwater Horizon* disaster, and determined that none of the final changes ignores or contradicts any of those recommendations, or alters any provision of the 2016 WCR in a way that would make the result inconsistent with those recommendations. Further, nothing in this final rule alters any elements of other rules promulgated since *Deepwater Horizon*, including the Increased Safety Measures for Energy Development on the OCS (Drilling Safety Rule) (75 FR 63346, October 14, 2010), SEMS I and II (75 FR 63610, October 15, 2010, 78 FR 20423, April 5, 2013). BSEE's review has been thorough, careful, and tailored to the task of reducing unnecessary regulatory burdens, while ensuring that operators conduct OCS activities in a safe and environmentally responsible manner.

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Table of Acronyms

LIST OF ACRONYMS AND REFERENCES	
ANL	Argonne National Laboratory

ANPR	Advance Notice of Proposed Rulemaking
ANSI	American National Standards Institute
APA	Administrative Procedure Act
APD	Application for Permit To Drill
API	American Petroleum Institute
APM	Application for Permit to Modify
ASME	American Society of Mechanical Engineers
BAST	Best Available and Safest Technology
BAVO	BSEE Approved Verification Organization
BOEM	Bureau of Ocean Energy Management
BOP	Blowout Preventer
BSEE	Bureau of Safety and Environmental Enforcement
BSR	Blind Shear Ram
BTS	Bureau of Transportation Statistics
CDWOP	Conceptual Deepwater Operations Plan
Department	Department of the Interior
DWOP	Deepwater Operations Plan
EA	Environmental Assessment
ECD	Equivalent Circulating Density
EIS	Environmental Impact Statement
E.O.	Executive Order
EOR	End of Operations Report
ESA	Endangered Species Act
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FRIA	Final Regulatory Impact Analysis
FSHR	Free Standing Hybrid Riser
GDP	Gross Domestic Product
HPHT	High Pressure High Temperature
IADC	International Association of Drilling Contractors
IBR	Incorporated By Reference
IC	Information Collection
IEC	International Electrotechnical Commission
IOGP	International Association of Oil And Gas Producers
IRIA	Initial Regulatory Impact Analysis
ISO	International Organization For Standardization
JIP	Joint Industry Project
LMRP	Lower Marine Riser Package
MASP	Maximum Anticipated Surface Pressure
MIA	Mechanical Integrity Assessment
MODU	Mobile Offshore Drilling Unit

MPB	Multiple Physical Barrier
NAICS	North American Industry Classification System
NEPA	National Environmental Policy Act
NPRM	Notice of Proposed Rulemaking
NTTAA	National Technology Transfer and Advancement Act
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OEM	Original Equipment Manufacturer
OFR	Office of the Federal Register
OIRA	Office of Information and Regulatory Affairs
OMB	Office of Management Budget
OORP	Office of Offshore Regulatory Programs
psi	pounds per square inch
ppg	pounds per gallon
PRA	Paperwork Reduction Act
PWD	Pressure While Drilling
QRA	Quantitative Risk Analysis
RCD	Regional Containment Demonstration
RFA	Regulatory Flexibility Analysis
RIA	Regulatory Impact Analysis
ROT	Remotely Operated Tools
ROV	Remotely Operated Vehicle
RTM	Real-Time Monitoring
SBA	Small Business Administration
SCCE	Source Control and Containment Equipment
SDO	Standards Development Organization
Secretary	Secretary of the Interior
SEMS	Safety and Environmental Management Systems
SPPE	Safety and Pollution Prevention Equipment
SRAM	System Risk Assessment Management
TBT	Technical Barriers to Trade
WAR	Well Activity Report
WCP	Well Containment Plan
WCR	Well Control Rule
WTO	World Trade Organization

I. Background

A. BSEE Statutory and Regulatory Authority and Responsibilities

BSEE derives its authority primarily from the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. 1331-1356a. Congress enacted OCSLA in 1953, authorizing the Secretary of the Interior (Secretary) to lease the OCS for mineral development, and to regulate oil and gas exploration, development, and production operations on the OCS. The Secretary delegated authority to perform certain of these functions to BSEE.

To carry out its responsibilities, BSEE regulates offshore oil and gas operations to enhance the safety of exploration for and development of oil and gas on the OCS, to ensure that those operations protect the environment, and to implement advancements in technology. BSEE also conducts onsite inspections to ensure compliance with regulations, lease terms, and approved plans and permits. Detailed information concerning BSEE's regulations and guidance to the offshore oil and gas industry may be found on BSEE's website at: https://www.bsee.gov/guidance-and-regulations.

BSEE's regulatory program covers a wide range of facilities and activities, including drilling, completion, workover, production, pipeline, and decommissioning operations. Drilling, completion, workover, and decommissioning operations are types of well operations that offshore operators[2] perform throughout the OCS. These well operations are the primary focus of this rulemaking.

B. Purpose and Summary of the Rulemaking

This final rule amends and updates certain provisions of the Blowout Preventer Systems and Well Control regulations and updates the regulations to better implement BSEE policy. This final rule will strengthen the Administration's policy of facilitating energy security leading to

[2] BSEE's regulations at 30 CFR part 250 generally apply to "a lessee, the owner or holder of operating rights, a designated operator or agent of the lessee(s)…," covered by the definition of "you" in § 250.105. For convenience, this preamble will refer to all of the regulated entities as "operators," unless otherwise indicated.

increased domestic oil and gas production, and reduce unnecessary burdens on stakeholders while still maintaining safety and environmental protection. Since 2010, in order to improve worker safety and environmental protection, BSEE has promulgated a number of rules (*e.g.*, Safety and Environmental Management Systems I and II (75 FR 63610, October 15, 2010; 78 FR 20423, April 5, 2013), the final safety measures rule (77 FR 50856, August 22, 2012), the production safety systems final rule (83 FR 49216, September 28, 2018), and the 2016 WCR (81 FR 25888; April 29, 2016). The 2016 WCR consolidated into one part the equipment and operational requirements pertaining to BOP and well control for offshore oil and gas drilling, completions, workovers, and decommissioning that were previously codified in various parts of BSEE's regulations. More specifically, the 2016 WCR incorporated industry standards; adopted reforms to well design, well control, casing, cementing, real-time well monitoring, and subsea containment requirements; and implemented many of the recommendations arising from various investigations of the *Deepwater Horizon* incident. Most of the provisions of the 2016 WCR became effective on July 28, 2016.

Since the time the 2016 WCR regulations took effect, oil and natural gas operators have raised various concerns, and BSEE has identified issues during the implementation of the rule. The concerns and issues involve certain regulatory provisions that impose undue burdens on oil and natural gas operators, but do not significantly enhance worker safety or environmental protection. BSEE understands the operators' concerns that have been raised, but BSEE also fully recognizes that the BOP and other well-control requirements are critical to ensure safety and environmental protection. Consistent with recent Executive and Secretary's Orders (discussed further in Section I.D below) and congressional direction, BSEE undertook a review of the 2016 WCR. It did so with a view toward the policy direction of encouraging energy exploration and production on the OCS and reducing unnecessary regulatory burdens, while ensuring that any such activity is conducted in a safe and environmentally responsible manner. BSEE carefully analyzed all 342 provisions of the 2016 WCR, and proposed to revise or add to 71 provisions -- or approximately 20% -- of the 2016 WCR provisions. In the process, BSEE compared each of the changes to the 424 recommendations arising from 26 separate reports from 14 different organizations[3] developed in the wake of and response to the *Deepwater Horizon* disaster. This final rule is consistent with the proposed revisions and none of the final changes ignore or contradict any of those recommendations, or alters any provision of the 2016 WCR in a way that would make the result inconsistent with those recommendations. Further, nothing in this final rule alters any elements of other rules promulgated since *Deepwater Horizon*, including the Drilling Safety Rule (Oct. 2010), SEMS I (Oct. 2010), and SEMS II (April 2013). BSEE's review was thorough, careful, and tailored to the task of reducing unnecessary regulatory burdens while ensuring that OCS activity is conducted in a safe and environmentally responsible manner.

This rule revises current regulations that impact offshore oil and gas drilling, completions, workovers, and decommissioning activities. The final regulations also address various issues that BSEE identified during the implementation of the 2016 WCR, as well as numerous

[3] DOI, DOI OCS Safety Oversight Board, DOI OIG, DOI/Department of Homeland Security (DHS) Joint Investigation Team, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, Chief Counsel for the National Commission, National Academy of Engineering, Joint Industry Subsea Well Control and Containment Task Force, Environmental Law Institute, Ocean Energy Safety Advisory Committee, Chemical Safety Board, Joint Industry Oil Spill Preparedness and Response Task Force, Transportation Research Board, U.S. Government Accountability Office (GAO)

questions that have required substantial informal guidance from BSEE regarding the interpretation and application of the 2016 WCR.[4] For example, this final rule:

- Clarifies the rig movement reporting requirements.
- Clarifies and revises the requirements for certain submittals to BSEE to eliminate redundant and unnecessary reporting.
- Clarifies the drilling margin requirements in §§ 250.414 and 250.427.
- Revises § 250.723 by removing references to lift boats from the section.
- Removes certain prescriptive requirements for RTM.
- Replaces the use of a BAVO with the use of an independent third party for certain certifications and verifications of BOP systems and components, and removes the requirement to have a BAVO submit a Mechanical Integrity Assessment report for the BOP stack and system.
- Revises the accumulator system requirements and accumulator bottle requirements to better align with API Standard 53.
- Revises the control station and pod testing schedules to ensure component functionality without inadvertently requiring duplicative testing.
- Includes coiled tubing and snubbing requirements in Subpart G.
- Revises the text to ensure consistency and conformity across the applicable sections of the regulations.
- Revises the regulation to include a 21-day BOP testing frequency.

C. Summary of Documents Incorporated by Reference

This rule updates a document currently incorporated by reference to a newer edition, includes an addendum to an already incorporated standard, and adds two new standards for incorporation. A brief summary of the final changes, based on the descriptions in each standard or specification, is provided in the text that follows.

<u>API Standard 53 and addendum– Blowout Prevention Equipment Systems for Drilling Wells</u>

API Standard 53 (Fourth Edition published November 2012) and addendum (published July 2016) provide requirements for the installation and testing of blowout prevention equipment systems whose primary functions are to confine well fluids to the wellbore, provide means to add fluid to the wellbore, and allow controlled volumes to be removed from the wellbore. BOP

[4] BSEE posted approximately 100 responses to questions regarding the 2016 WCR provisions on the BSEE webpage https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule.

equipment systems are comprised of a combination of components that are covered by this document, including: installations for surface and subsea BOPs; choke and kill lines; choke manifolds; control systems; and auxiliary equipment. The document also addresses equipment arrangements. The Addendum contains clarifications to API Standard 53, 4th Edition.

This standard also provides industry best practices related to the use of dual shear rams, maintenance and testing requirements, and failure reporting. The standard does not address diverters, shut-in devices, and rotating head systems (rotating control devices), whose primary purpose is to safely divert or direct flow, rather than to confine fluids to the wellbore. It also does not include procedures and techniques for well control and extreme temperature operations.

API Bulletin 92L - Drilling Ahead Safely with Lost Circulation in the Gulf of Mexico

API Bulletin 92L, First Edition, was published in August 2015. API Bulletin 92L addresses drilling margins and drilling ahead with lost circulation in wells drilled in the OCS environments. The drilling margin is the difference between the maximum pore pressure and minimum fracture pressure of a formation. Lost circulation is the flow of drilling fluid into the formation instead of returning up the annulus. If uncontrolled, lost circulation can lead to consequences potentially as severe as a blowout. This bulletin identifies items that should be considered to safely address lost circulation challenges when equivalent circulation density (ECD) exceeds the fracture gradient of a formation. It also provides guidance regarding appropriate responses when lost circulation is experienced with either surface or subsea BOP stack operations (excluding diverter operations). Lastly, the bulletin recommends four decision tree flow charts for common lost circulation scenarios in the OCS: 1) Drilling Exploration Wells with Lost Circulation; 2) Drilling Ahead Below Salt with Lost Circulation; 3) Drilling Depleted Zones with Lost Circulation; and 4) Managed Pressure Drilling with Lost Circulation. Although similar, each flow chart is unique and specific to the circumstances surrounding the lost circulation event. The flow charts serve as an aid for operators to use when deciding how best to safely drill ahead when lost circulation occurs.

API Standard 65-part 2, Isolating Potential Flow Zones During Well Construction

This standard, which API issued in December 2010 (reaffirmed November 2016), outlines the process for isolating potential flow zones during well construction. The new Standard 65-part 2 enhances the description and classification of well-control barriers, and defines testing requirements for cement to be considered a barrier.

API Recommended Practice 17H – Remotely Operated Tools and Interfaces on Subsea Production Systems

The final rule updates the incorporated version of this document from the First Edition (July 2004, reaffirmed January 2009) to the Second Edition (June 2013) and Errata (January 2014). This recommended practice provides general recommendations and overall guidance for the design and operation of remotely operated tools (ROT) and remotely operated vehicle (ROV) tooling used on offshore subsea systems. ROT and ROV performance is critical to ensuring safe and reliable deepwater operations and this document provides general performance guidelines for this and associated equipment. One of the main differences between the first edition and second edition of this recommended practice is that the second edition includes provisions on high flow Type D hot stabs.

International Organization for Standardization (ISO)/IEC (International Electrotechnical Commission) 17021-1 - Conformity assessment - Requirements for bodies providing audit and certification of management systems – Part 1: Requirements.

The final rule incorporates into the regulations a reference to ISO/IEC 1702-1, First Edition, June 15, 2015, for purposes of the quality management system certification requirements of § 250.730(d). This standard contains principles and requirements to ensure the competence, consistency, and impartiality of bodies providing audit and certification of all types of management systems. It provides general requirements for such bodies performing audit and certification in the fields of quality, the environment, and other types of management systems. Incorporation of this standard will provide clarity and consistency surrounding the critical qualifications of entities responsible for certifying quality management systems for the manufacture of BOP stacks.

How to view the documents incorporated by reference

When a copyrighted publication is incorporated by reference into BSEE regulations, BSEE is obligated to observe and protect that copyright. BSEE is working with the standards organizations to provide free online viewing for standards incorporated by reference. Many such organizations already make relevant standards publicly available free of charge. BSEE provides members of the public with website addresses where these standards may be accessed for viewing—sometimes for free and sometimes for a fee. Standards development organizations decide whether to charge a fee. One such organization, API, provides free online public access to view read-only copies of its key industry standards, including a broad range of technical standards. All API standards that are safety-related and that are incorporated into Federal regulations, or that are considered for incorporation, are available to the public for free viewing online in the Incorporation by Reference Reading Room on API's website at:

http://publications.api.org.[5] In addition to the free online availability of these standards for viewing on API's website, hardcopies and printable versions are available for purchase from API. The API website address to purchase standards is: https://www.api.org/products-and-services/standards/purchase.

The International Organization for Standardization (ISO) creates documents that provide requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes, and services are fit for their purposes. All ISO International Standards are available at the ISO Store for purchase at: https://www.iso.org/store.html.

For the convenience of members of the viewing public who may not wish to purchase copies or view these incorporated documents online, they may be inspected at BSEE's office in Houston, at 1919 Smith Street, Suite 14042, Houston, Texas 77002. To make an appointment to inspect incorporated material at the Houston BSEE office, call 1-844-259-4779. BSEE may also make the standards available at its other offices located in: Washington, DC; Sterling, Virginia; New Orleans, Louisiana; Camarillo, California; and Anchorage, Alaska. Individuals wishing to view standards at a BSEE office may make arrangements by sending an email to: regs@bsee.gov.

D. Executive and Secretary's Orders

On March 28, 2017, the President issued Executive Order (E.O.) 13783—Promoting Energy Independence and Economic Growth (82 FR 16093). The E.O. directed Federal agencies to review all existing regulations and other agency actions with a goal toward "avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent

[5] To view these standards online, go to the API publications website at: http://publications.api.org. You must then log-in or create a new account, accept API's "Terms and Conditions," click on the "Browse Documents" button, and then select the applicable category (*e.g.*, "Exploration and Production" or "IBR Documents Under Consideration") for the standard(s) you wish to review.

job creation." It instructs agencies to "review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law."

On April 28, 2017, the President issued E.O. 13795—Implementing an America-First Offshore Energy Strategy (82 FR 20815), which directed the Secretary to review the 2016 WCR for consistency with the policy "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" and to "publish for notice and comment a proposed rule revising that rule, if appropriate and as consistent with law." It further directed the Secretary of the Interior to "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."

To further implement E.O. 13795, the Secretary issued Secretary's Order No. 3350 on May 1, 2017, directing BSEE to review the 2016 WCR for consistency with E.O. 13795 and prepare a report "providing recommendations on whether to suspend, revise, or rescind the rule" in response to concerns raised by stakeholders that the 2016 WCR "unnecessarily include[s] prescriptive measures that are not needed to ensure safe and responsible development of our OCS resources."

Based on E.O.s 13783 and 13795, congressional guidance, and Secretary's Order No. 3350, and in light of the requests received for clarification and revision of various provisions, BSEE reviewed the regulations promulgated through the 2016 WCR and is making revisions to those regulations that will reduce unnecessary burdens on industry without affecting key 2016 WCR provisions that have a significant impact on improving safety and equipment reliability.

On September 28, 2018, the Department of the Interior (Department) issued Secretary's Order No. 3369 (S.O. 3369), "Promoting Open Science." S.O. 3369 directs bureaus within the Department to ensure that their use of science in decision-making is open and transparent to facilitate public awareness, and to ensure that, when decisions are based on scientific data or literature, bureaus utilize the "best available science." As previously discussed, BSEE used a number of sources of information to inform decisions related to these revisions, including comments received through a "Request for comments" on the DOI's regulatory reform initiatives, published in the *Federal Register* on June 22, 2017 (82 FR 28429), and experience gained during the implementation of the 2016 WCR and the policies developed in response to those experiences. In addition, BSEE solicited input from interested parties to identify potential revisions to the regulations, including through the public forum held on September 20, 2017, in Houston, Texas. Further, BSEE gained valuable insights from comments received in response to the proposed rule. BSEE regulatory staff used information from these sources and worked directly with BSEE regional subject matter experts to assess the current requirements for well control and blowout preventers in order to determine which provisions could potentially be revised, while leaving critical safety provisions intact to maintain safety and environmental protection. BSEE also reviewed publically available lists of alternate procedures and departures that BSEE granted through permits, and reviewed past incident data, specifically concerning information on equipment failure after a successful seal of the well.

E. Stakeholder Engagement

Implementation of the 2016 WCR - BSEE Qs and As

The Department promulgated the original "Blowout Preventer Systems and Well Control" final rule (WCR) (81 FR 25888, April 29, 2016). Subsequently, during the implementation of the regulations, BSEE received numerous questions from stakeholders seeking clarification and guidance concerning the 2016 WCR's provisions. The questions covered a vast array of issues and spanned multiple subparts of the regulations.

BSEE reviewed each question it received and decided whether the question presented an issue that was appropriate for Bureau guidance. To the extent that a question required guidance or clarification, BSEE provided a response to clarify any potentially confusing language. In addition to deciding on the appropriateness of a question for guidance, BSEE determined whether the question was of sufficient public interest to merit broader publication of a response. After finalizing regulatory guidance in response to a stakeholder's question, BSEE typically publishes both the question and BSEE's answer on its webpage. The information, which reflects BSEE's guidance on the current regulations, may be found at: https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule. BSEE posted approximately 100 responses to questions regarding the 2016 WCR provisions on the webpage.

BSEE reexamined the questions and answers pertaining to the 2016 WCR. After carefully considering all relevant information in the questions and answers, BSEE determined that it is appropriate to revise certain of the regulations promulgated through the 2016 WCR to support the goals of the regulatory reform initiative, while still maintaining safety and environmental protection. Additionally, the revisions will help clarify any ambiguity in the regulatory language, eliminate redundancies in the provisions, and align specific requirements more closely with relevant technical standards.

BSEE public forum on well control and blowout preventer rule:

To ensure a complete and thorough review of the 2016 WCR, prior to this rulemaking, BSEE solicited input from interested parties to identify potential revisions to the regulations promulgated through the 2016 WCR that would reduce regulatory burdens while maintaining safety and environmental protection on the OCS. BSEE held a public forum on September 20, 2017, in Houston, Texas. More than 110 participants attended and provided comments and suggestions. Participants included representatives from:

- Federal agencies;
- Media;
- Oil and gas companies;
- Classification societies;
- Trade associations;
- Environmental groups; and
- Equipment manufacturers.

Additionally, there were eight presentations made at the forum. These presentations are available at: https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule/public%20forum.

II. Discussion of Compliance Dates for the Final Rule

BSEE considered the public comments on the proposed rule, as well as relevant information gained during, among other activities, BSEE's interactions with stakeholders, involvement in development of industry standards, and evaluation of current technology. Based on its analysis, BSEE is setting an effective date of 60 days following publication of the final rule, by which time operators will be required to comply with most of the final rule's provisions. BSEE determined, however, that it is appropriate to identify alternative compliance dates, subsequent to the effective date of the final rule, for certain provisions identified below. Detailed explanations for the requirements associated with these compliance dates are provided in Sections IV and V of this preamble.

A. April 29, 2021 – Alternative Cutting Device no longer allowed

Current regulations require, at § 250.733(a)(1), that operators use an alternative cutting device capable of shearing any electric-, wire-, or slick-line before closing the BOP if, prior to April 29, 2021, an operator's blind shear rams (BSR) are unable to cut such lines under maximum anticipated surface pressure (MASP) and seal the wellbore. After April 29, 2021, BSEE will no longer allow the use of an alternative cutting device, and the BSR in the surface stack will be required to shear any electric-, wire-, or slick-line under MASP and seal the wellbore. BSEE is aware that some current BSR technology is available to shear electric-, wire-, or slick-line. BSEE established this extended timeframe to allow operators to acquire and install equipment to meet the requirements and to discontinue the use of the alternative cutting device.

Current regulations at § 250.733(b)(1) require that new surface BOPs installed on floating production facilities after April 29, 2019, comply with the BOP requirements of § 250.734(a)(1). This final rule extends that compliance date to April 29, 2021, in order to eliminate any confusion between applicable compliance dates for §§ 250.733(b)(1) and 250.734(a)(1). The dual shear ram requirements for both surface and subsea BOPs will now have the same compliance date of April 29, 2021.

B. May 1, 2023 – Drill pipe positioning within shearing blades

Current regulations at § 250.734(a)(16)(i) require operators to have the capability to position the drill pipe completely within the area of the shearing blades during shearing operations no later than May 1, 2023. This final rule retains that compliance date from the 2016 WCR.

III. Discussion of Final Rule Requirements

A. Summary of Key Regulatory Provisions

After review of all the public comments received in response to the proposed rule, BSEE determined that it will include the following proposed revisions in this final rule. This final rule includes most of the provisions in the proposed rule without change, although the final rule revises several of the proposed provisions in response to comments, as explained in sections IV and V of this preamble.

Documents incorporated by reference[6] – The final rule:

- Requires compliance with the industry standards contained in API Standard 53.
- Requires compliance with API RP 17H to standardize ROV hot stab activities. This will allow certain functions of the BOP to be activated remotely and within specified timeframes.
- Requires compliance with the cementing guidelines of API Standard 65—Part 2 to help achieve a successful cement job.
- Requires compliance with ISO/IEC 17021-1, which provides requirements of an entity that certifies quality management systems for BOP stack manufacturing.
- Requires compliance with API Bulletin 92L, which provides guidance regarding how to safely address lost circulation challenges.

Safe drilling practices – The final rule:

- Requires operators to maintain safe drilling margins, provides details on when operators may request BSEE approval of the safe drilling margins, and specifies actions the operator must take if a safe drilling margin cannot be maintained.

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[6] To view online read-only API documents visit: http://publications.api.org/AccessToDocuments.aspx

- Includes requirements related to downhole equipment that operators use to help reduce the likelihood of a major well-control event and ensure the overall integrity of the well.
- Requires real-time monitoring when conducting well operations with a subsea BOP or with a surface BOP on a floating facility, or when operating in a high pressure high temperature (HPHT) environment. Also requires operators to develop and implement a real-time monitoring plan. This will allow operators to anticipate and identify issues in a timely manner and to utilize resources to assist in addressing critical issues.

Failure reporting and analysis – The final rule:

- Requires that operators report any significant problems with BOP or well-control equipment to BSEE or BSEE's designated third party, so BSEE can help analyze failure trends and determine whether information should be provided, in a timely manner, to OCS operators and, if appropriate, to international offshore regulators and operators.
- Requires that operators conduct an investigation and failure analysis within a designated timeframe to help ensure that the causes of failures are identified and addressed.

Equipment requirements – The final rule:

- Requires access to and utilization of well intervention equipment for certain subsea completed wells with a tree installed. This will allow the necessary equipment to be maintained and available to perform intervention operations when necessary.
- Requires the BOP accumulator capacity to provide fast closure of the BOP components for autoshear/deadman in accordance with API Standard 53.

Operational requirements – The final rule:

- Requires retesting protocols for when the BOP or lower marine riser package (LMRP) are unlatched and then relatched. These requirements provide clarity for the testing required when an operator returns to a well location and relatches the BOP or LMRP to the well. These tests help confirm that the BOP or LMRP is properly functional prior to resuming operations after being removed.

- Requires high and low pressure testing procedures for certain BOP components. The testing requirements codify BSEE policy and provide clarity and consistency for permitting.
- Requires the development of an alternate testing schedule for control stations and pods for subsea BOPs. The intended result of an alternating testing schedule is to ensure that operators can use each control station, and each pod for subsea, to properly function all required BOP components, while reducing unnecessary duplicative testing and risk of component wear.

B. Summary of Significant Differences between the Proposed and Final Rules

After consideration of all relevant and significant comments, BSEE made a number of revisions from the proposed rule to the final rule. We are highlighting several of these changes here because they are significant and because numerous comments addressed these topics. Discussions of the relevant and significant comments and BSEE's responses are found in sections IV and V of this preamble. The significant revisions made in response to comments include:

1. Safe drilling margin – §§ 250.414 and 250.427(b)

When drilling a well, operators use the hydrostatic pressure from a mud column to keep sufficient pressure on the formation to prevent gas or oil from flowing into the wellbore (*i.e.,* a "kick"). If the hydrostatic pressure from the mud column is too high, however, the formation may fracture and result in a significant number of operational issues, one of which is "lost returns." Lost returns, or lost circulation, occur when drilling fluids escape from the well into the formation. A drilling margin is the difference between the pore pressure of the formation, with the mud weight taken into consideration, and the fracture pressure of the formation. The 2016 WCR established a default minimum drilling margin of 0.5 ppg, but also provided avenues for operators to obtain approval of lower margins through the permitting process (81 FR 25894). Since the effective date of the 2016 WCR, BSEE has approved many Applications for Permit to Drill (APDs) with a drilling margin less than 0.5 ppg.[7] BSEE did not propose changes to the 0.5 ppg safe drilling margin requirements; however, BSEE solicited comments on possible revisions to, or options regarding, the 0.5 ppg drilling margin issue.

Multiple commenters recommended replacing the current requirement with a performance-based standard under which an approved safe drilling margin would be established on a case-by-case basis, based on data and analysis specific to a particular well. They suggested that this is a safer and better alternative that would provide a risk-based approach that ensures safety and provides investment certainty to the industry. Multiple commenters also submitted comments on § 250.427 and recommended that, in instances where an operator encounters a lost circulation zone, the operator should have options for safely addressing the situation. In particular, many commenters asserted that suspending operations in certain circumstances may negatively impact safety and that drilling ahead to get through a lost circulation zone may be the safest option to restore the integrity of the well. For example, a commenter asserted that suspending drilling while in the weak zone to set casing (or otherwise remedy the situation) may simply transfer risk to a deeper hole section, where conditions may be even more challenging. Commenters

[7] Between August 1, 2016 and March 22, 2018, "BSEE's records show that there have been 305 wells drilled. Of those wells, BSEE approved operators' use of drilling margins that are less than 0.5 ppg for 32 wells." 83 FR 22,128, 22,133 (May 11, 2018).

suggested that it is appropriate for operators to specify in the Deepwater Operations Plan (DWOP) or APD how they will remedy an anticipated loss of circulation on bottom. They suggested using API Bulletin 92L as the standard for responding to such situations. A significant number of commenters also strongly opposed any changes to the 0.5 ppg drilling margin requirements in the current regulations.

In this final rule, BSEE is not revising the 0.5 ppg default drilling margin requirement or the requirements for justifying any alternative equivalent downhole mud weight. However, based on comments received, BSEE is revising § 250.414(c)(2) to allow operators the option to submit the required justification for BSEE approval at an earlier date rather than waiting to submit with the APD. The proposed rule indicated that BSEE was considering "whether it should adhere to its practice of identifying a specific drilling margin with an avenue for allowing operators to submit adequate documentation justifying the use of a different drilling margin . . . ." (83 FR 22133). The relevant comments informed BSEE's decision to revise § 250.414(c)(2) to permit submission of the alternative drilling margin justification prior to submitting an APD. Also, based on comments received, BSEE is revising § 250.427(b) to allow an operator to respond to lost circulation events in accordance with API Bulletin 92L and to require notification to the BSEE District Manager documenting the operator's use of API Bulletin 92L.[8] In conjunction with the use of API Bulletin 92L, BSEE is requiring that an operator submit a revised permit documenting any remedial actions. BSEE is also clarifying that the District Manager must review and approve proposed remedial actions in an APD. BSEE recognizes that API Bulletin

[8] API Bulletin 92L provides operators with flow charts to help evaluate what is happening in the well during lost circulation events and to respond accordingly. (e.g., Depending on the situation operators may have to stop drilling and run casing, or contact the regulator and drill ahead no more than 300 ft)

92L may not be a consensus document. According to API policy,[9] documents that are classified as "bulletins" may be developed without following a consensus process, which is the preferred process for documents incorporated by reference in government regulations according to the guidance in OMB Circular A-119. However, OMB Circular A-119 does not preclude the use of standards that are developed without following a voluntary consensus process. API Bulletin 92L addresses specific technical issues, such as lost circulation while drilling, to help operators diagnose well stability issues and remedy the situation. BSEE determined that this document is consistent with BSEE policy in the approaches used to address these issues, appropriate for meeting the agency's regulatory needs, and preferable to an agency-developed standard. Therefore, API Bulletin 92L is appropriate for incorporation into the regulations, even though it is a non-consensus developed bulletin. BSEE has evaluated API Bulletin 92L and determined that compliance with it would not reduce safety. The content of the bulletin includes flow charts that can be used as an aid for operators to use in deciding how best to safely drill ahead when lost circulation occurs and the required criteria and procedures are met.

2. Centering capabilities while shearing - §§ 250.732 and 250.734(a)(16)

Current regulations at §§ 250.732 and 250.734 require the use of a shear ram positioning mechanism to ensure that pipe is centered within the area of the shearing blade. Since the publication of the 2016 WCR, many of the shear ram designs have improved the shearing capabilities to help ensure shearing is conducted on the appropriate shearing area of the shear blades. This is commonly done by shaping the shear ram cutting blades in a "V" or "W" pattern to help center the pipe as it shears, as well as to increase the blade face surface area to ensure

[9] The Organization and Procedures for the CSOEM: Policy Document 2017 (S1) and the Procedures for Standards Development 2016 (Procedures for Standards Development).

there are no areas that cannot shear the pipe in the well. Accordingly, BSEE proposed to remove the centering mechanism requirements in both §§ 250.732 and 250.734. However, in the proposed rule preamble, BSEE solicited comments about the effectiveness of requiring shear rams to center pipe or wire while shearing, or requiring shear rams to have the capability to shear any pipe or wire in the hole without a separate centering mechanism. BSEE also discussed the option of retaining the centering mechanism requirements, but expressly provided that the shear rams with these capabilities satisfy the requirements.

Based on comments, BSEE recognizes that the technology exists to help ensure the pipe is positioned within the shear surface to optimize shearing capabilities. BSEE agrees that even though this technology exists, the rule as proposed would not have specifically required the use of such technology. In this final rule, BSEE is now retaining the existing requirement to maintain the capability to position the pipe within the shearing blade, however BSEE will not require this to be achieved using a separate mechanism and will allow this capability to be accomplished with the shear ram itself. As encouraged by Congress[10] to ensure that offshore operations promote safety and protect the environment in a technically feasible manner, BSEE does not want to limit the use of improved technological advancements in shear blade designs.

3. Shearing combinations - § 250.734(a)(1)(ii)

[10] Explanatory Statement to Accompany Div G. of Consolidated Appropriations Act, 2017 (Interior, Environment, and Related Agencies), Pub. L. No. 115-31 (May 5, 2017). ("Blowout Preventer Systems and Well Control Rule. - The Committees encourage the Bureau to evaluate information learned from additional stakeholder input and ongoing technical conversations to inform implementation of this rule. To the extent additional information warrants revisions to the rule that require public notice and comment, the Bureau is encouraged to follow that process to ensure that offshore operations promote safety and protect the environment in a technically feasible manner."). 163 Cong. Rec. H 3327, 3880 (May 3, 2017).

In the 2016 WCR, BSEE established that both shear rams must have the capability to shear the specified equipment. During the development of the 2016 WCR, BSEE did not receive comments specific to the "both shear rams" provision.

BSEE proposed to revise § 250.734(a)(1)(ii) by clarifying that a "combination of the" shear rams must be capable of shearing all the items specified in the paragraph. BSEE is aware that certain casing shears still have difficulty shearing electric-, wire-, or slick-line, while certain BSRs have difficulties shearing larger casing sizes. As stated in the proposed rule, the proposed revision would have provided the operators flexibility for how they utilize the BOP system and components for operations, while still ensuring all critical shearing capabilities.

Multiple commenters generally agreed with the proposed language; however, other commenters opposed any changes to existing requirements. Commenters expressed concerns about the proposed removal of the requirement to have two fully redundant shear rams and suggested that such a change would not account for the possibility of one shear ram malfunctioning. The benefit of having two, fully capable shear rams is a fully redundant back up. Under the proposed revisions, if one shear ram were to fail and the remaining shear ram could not independently shear the necessary equipment, well control might not have been achieved.

Based on comments received, BSEE is keeping the language in existing § 250.734(a)(1)(ii) that requires "both shear rams to be capable of shearing" the specified equipment in the hole. BSEE principally bases this decision on comments BSEE received concerning the importance of shearing redundancy and a recognition that the proposed language's reliance on a "combination" of shear rams potentially interjected some ambiguity regarding the number of rams subject to this shearing requirement.

BSEE is not revising the dual shear ram requirements or the associated compliance date of April 29, 2021, found in existing § 250.734(a)(1).

4. Subsea accumulator capacity - § 250.734(a)(3)(iii)

The purpose of the accumulator system and applicable accumulator capacity requirements is to ensure that there is sufficient volume and pressure in the accumulator bottles to properly operate BOP components in a specified timeframe regardless of the location of the accumulator bottles.

In the proposed rule, BSEE proposed to remove the reference to the subsea location of the accumulator capacity. BSEE understands that the accumulator system works together with the surface and subsea accumulator capacity to achieve full functionality and BSEE determined that it was unnecessary to specifically identify only subsea requirements when API Standard 53 covers the entire system.

BSEE received multiple comments supporting the proposed revisions; however, BSEE also received comments asserting that BSEE had not explained how removing the reference to the subsea location of accumulator capacity would ensure that the accumulator system can adequately function if there is a loss of the power fluid connection to the surface. Based on these comments, BSEE has decided to keep the clarification that certain accumulator capacity must be located subsea in order to avoid confusion about how the autoshear and deadman systems utilize accumulator capacity. The autoshear and deadman systems do not use accumulator capacity from the surface accumulators. The conditions to function these emergency systems involve the loss of electrical/hydraulic communication or connection between the BOP stack and the rig. Therefore, it is necessary to require that the autoshear and deadman emergency systems' accumulator capacity must be able to function properly without connection or communication with the surface and therefore the accumulator capacity must be located subsea.

In this final rule, BSEE is clarifying that the accumulator bottles for the autoshear/deadman systems need to be located subsea. The autoshear/deadman systems are not controlled by surface personnel and are essentially considered failsafe. Consistent with the existing regulations, the accumulator bottles that operate these systems need to be located subsea to ensure there is enough fluid and pressure to operate the associated functions. This is a clarification to ensure there is no confusion about where the required fluid and pressure must reside to operate the autoshear/deadman emergency functions.

5. 21-day BOP testing frequency – § 250.737

In the proposed rule, BSEE requested comments on whether the BOP testing interval should be 7 days, 14 days, or 21 days for all operations (*i.e.*, drilling, completions, workovers, and decommissioning). BSEE also requested comments on the specific cost and operational implications of each testing interval to further its consideration of the issue. Current regulations (multiple citations throughout § 250.737) require pressure and function testing of specific BOP components for drilling, completions, workovers, and decommissioning operations every 14 days. Although BSEE did not present revisions to the testing frequency regulatory text in the proposed rule, BSEE raised the option of 21-day BOP testing in the preamble.

The industry and BSEE currently rely on function and hydrostatic tests to verify the performance of BOP equipment in the field. These tests have traditionally been the primary method of verifying the capability of in-service equipment. In recent years, the industry has raised concerns related to the benefits of pressure and function testing of subsea BOPs when compared to the costs and potential operational issues associated with such testing, including wear and tear.

BSEE received multiple comments supporting a 21-day BOP testing frequency. These comments provided some data to justify a 21-day BOP testing frequency. However, BSEE also received many comments opposing any changes to the BOP testing frequency and a commenter even stated that the BOP testing frequency should be increased to every 7 days.

BSEE analyzed the justifications provided in the 2016 WCR for the decision to adopt a 14-day rather than a 21-day testing frequency. The relevant analysis offered little by way of data-driven conclusions, so BSEE has, through this rulemaking, undertaken a thorough analysis of the information available. In the final rule, based on comments received, BSEE is revising § 250.737 to allow the use of a 21-day BOP testing frequency if an operator meets certain criteria and if BSEE approves an operator's 21-day BOP testing frequency request. BSEE is requiring operators to demonstrate, in the 21-day BOP testing frequency request, that they have developed a BOP health monitoring plan that includes certain system capabilities. BSEE is requiring the BOP health monitoring plan to include condition monitoring tools that are able to provide continuous surveillance of sensor readings from the BOP control system, real-time condition analysis and displays, functional pressure signal analysis, and trending capabilities of the sensor data. The condition monitoring tools also must include failure propagation analysis and a failure tracking and resolution system to identify recurring problems. BSEE is also requiring operators to submit quarterly reports of the data collected to the BSEE Regional Supervisor, District Field Operations. BSEE will review this data to help ensure compliance with the requirements of the regulations and help support its continual analysis of the 21-day BOP testing frequency.

This approach offers a path for operators to avoid the identified cost and operational concerns associated with more frequent testing, while at the same time requiring that adequate and proven tools for ensuring safety and environmental protection are in place before testing frequency is changed to a 21-day interval.

IV. Discussion of Public Comments on the Proposed Rule

In response to the proposed rule, BSEE received over 265 sets of comments containing individually submitted comments and multiple similar group form letters, totaling over 118,000 submittals. Comments included submittals from individual entities (*e.g.*, companies, industry organizations, non-governmental organizations, State governments, and private citizens). Some entities submitted comments multiple times and a majority of the individual commenters submitted nearly identical comments (similar to a form letter). Over 117,000 of the comments submitted follow a type of form letter and contain similar comments. All relevant comments are posted at the *Federal eRulemaking* portal: *http://www.regulations.gov.* To access the comments at that website, enter BSEE–2018–0002 in the Search box. BSEE reviewed all comments submitted, and this section and section V of this preamble contain brief summaries of the relevant comments as well as of BSEE’s responses.

A. General Support for the Proposed Rule

BSEE received hundreds of comments expressing general support for the proposed rule. The public comments expressing or suggesting general support for the proposed rule as a whole or for some of its major provisions comprise a few hundred of the total number of comments received. BSEE received supporting comments from, but not limited to, oil and gas companies, contractors, industry trade groups, equipment manufacturers, class societies, private citizens, and legal firms. Some of the commenters expressing general support for the proposed rule also provided specific detailed comments, addressed further infra.

The comments submitted by industry trade groups, operators, and service companies generally supported the proposed alleviation of administrative burdens and reduction of prescriptive regulations. As rationale for their support of the proposed rule, those commenters often identified concerns about how the current regulations increase operational risks and impose unnecessary cost burdens but provide no commensurate safety improvements or environmental protection. However, while the commenters voiced support broadly for the proposed changes, some of them also cited additional regulatory provisions that they asserted impose unnecessary regulatory burdens that the proposed revisions would not go far enough to relieve, as discussed in this section and section V of this preamble.

B. General Opposition to the Proposed Rule

A majority of entities and individuals that commented on the proposed revisions expressed general opposition to the proposed rule and many of its major proposals. A majority of those comments were submitted by non-governmental organizations, environmental groups, multiple State Attorneys General, lawmakers from the U.S. House of Representatives and U.S. Senate, public, and academia.

A large majority of the approximately 118,000 comments that BSEE received voiced significant concerns about the proposed changes. The rationale for the commenters’ opposition to the proposed revisions to the existing regulations generally fell into two main categories. First, many commenters asserted that BSEE does not have sufficient evidence to support many of the proposed revisions to the existing regulations. However, many of the commenters did not provide additional information/data to support assertions. Comments in this first group highlighted the fact that BSEE adopted the WCR in 2016 and thus asserted that it has not had enough time to gather the data necessary to support any changes.

Second, some commenters cited the findings from the investigations and reports arising out of *Deepwater Horizon* to support their general contention that oversight of the oil and gas industry in the form of regulations is vitally important and necessary. Among these comments, opposition to the proposed rule was apparently premised on the belief that any “rollback” of the existing regulations will adversely impact safety and environmental protection.

For a discussion of the substantive comments in opposition to specific provisions and BSEE’s responses, refer to later parts of this section and Section V of this preamble.

C. 21-Day BOP Testing Frequency

In the proposed rule, BSEE did not propose any specific regulatory text changes to the existing requirement for the minimum 14-day testing frequency for BOP systems. However, BSEE solicited comments in the proposed rule on whether the BOP testing frequency should be 7 days, 14 days, or 21 days for all types of operations. BSEE also requested comments on the adequacy of the current function and pressure test requirements for BOP systems in predicting the performance of this equipment in subsequent drilling operations. Furthermore, BSEE requested comments about what circumstances or environments might justify an increase or decrease to the required testing frequency.

In addition, BSEE is aware of potential technologies that may improve the operability and reliability of BOP systems and thus may affect the need for and appropriate frequency of BOP testing. Accordingly, BSEE also solicited comments on whether there are additional technologies, processes, or procedures that can be used to supplement existing requirements and provide additional assurances related to the performance of this equipment. BSEE asked commenters to provide justifications and data to support their comments.

Summary of comments - 21-day BOP testing frequency:

BSEE received comments both supporting a 21-day BOP testing frequency and opposing such a change. Numerous commenters proposed aligning the regulatory requirement for BOP testing frequency with the 21-day testing frequency found in API Standard 53; some of those commenters cited the fact that Texas regulations for onshore operations have successfully used 21-day testing for many years. These commenters cited studies indicating that a 21-day testing frequency: provides for a safe and reliable BOP system; aligns with global practices and technological capabilities; and prevents extensive pressure testing that can cause premature system wear. Some commenters also asserted that function tests provide more reliable indications of BOP performance. Commenters also suggested a pilot program that would implement 21-day testing to gather data to assess the difference in BOP performance between 14 and 21-day testing frequency. Another commenter provided some data comparing the results of 14-day and 21-day BOP testing worldwide. Another commenter suggested that a 21-day testing interval is appropriate if there are tools, systems, and data collection to ensure that the 21-day testing keeps operational risk and process safety performance equivalent to the 14-day testing interval.

Commenters who did not support the change to the 21-day testing frequency noted that BSEE considered a 21-day BOP testing interval in the context of the 2016 WCR, but rejected that testing interval because the agency did not receive data to support it. The commenters further asserted that BSEE is again proposing a 21-day BOP testing interval, despite not having any new data to support the change. Another commenter proposed a 7-day interval for BOP testing, along with a recommendation that BSEE undertake a technical risk analysis of BOP failure rates for 7-, 14-, and 21-day BOP test intervals. One commenter suggested that BSEE postpone a revision to the BOP testing frequency and solicit input from an advisory committee regarding what a reasonable and prudent standard should be. A commenter requested that BSEE show the impact of the proposed change on all system risks and asserted that BSEE should not rely on industry comments as a basis for the change.

- **Response:** After considering all comments regarding this potential change, BSEE agrees with many of the commenters' recommendations to allow a 21-day test frequency, under limited circumstances when an operator meets appropriate qualifications. Therefore, BSEE is revising § 250.737 in the final rule to maintain the 14-day test frequency as the default requirement, but to allow operators to request special approval to use a 21-day BOP testing frequency in lieu of a 14-day BOP testing frequency if the operator meets certain criteria and receives BSEE approval. To address the concerns raised by commenters regarding the availability of data that demonstrates the impact on reliability due to testing frequency, the final rule requires any operator seeking to change testing frequency to develop a BOP health monitoring plan that includes condition monitoring tools that provide continuous surveillance of sensor readings from the BOP control system, real-time condition analysis and displays, functional pressure signal analysis, and trending capabilities of the sensor data. The condition monitoring tools also must include failure propagation analysis and a failure tracking and resolution system to identify recurring problems. BSEE is also requiring operators to submit quarterly reports of the data collected to the BSEE Regional Supervisor, District Field Operations. The BOP health monitoring plan will provide BSEE with relevant data on how the BOP equipment operates throughout the equipment lifecycle and additional assurance of the successful functioning and oversight of the BOP equipment. BSEE will review this data to help ensure compliance with the requirements of the regulations and help support its continual analysis of the 21-day testing frequency.

These efforts are consistent with BSEE's implementation of E.O.s 13783 and 13795, congressional guidance, and Secretary's Order No. 3350 (described in Section I.D above).

BSEE analyzed the justifications provided in the 2016 WCR for the decision to adopt a 14-day rather than a 21-day testing frequency, which offered little by way of data-driven conclusions. Following closure of the comment period, BSEE undertook a thorough review of available data, existing regulations, and all comments related to the evaluation of 7-, 14-, and 21-day BOP testing interval requirements. As part of its analysis, BSEE considered the BOP equipment failure reporting data captured in the U.S. Department of Transportation Bureau of Transportation Statistics (BTS) 2017 SafeOCS report titled *Blowout Prevention Safety System - 2017 Annual Report*.[11] The report analyzed 1129 events and found that there were 1044 notifications for subsea BOPs and 85 notifications for surface BOPs. Of the total events, 946 reported events were found while the BOPs were not in operation. That report observes on pg. 28 that "[w]ear and tear was the most frequently reported root cause of failures (53.6 percent)." This data helps BSEE establish a baseline of operating events for the 14-day BOP testing frequency. That report also indicates that various forms of monitoring were responsible for detecting at least as many reported "in-operation" BOP equipment failures as the equipment failures detected

[11] https://www.safeocs.gov/2017_WCR_Annual_Report_v4.pdf.

through additional testing during 2017. These data suggest that monitoring plays an important role in the detection of BOP equipment failures, in conjunction with regular testing. Health monitoring systems allow operators to detect and remediate potential failures before they occur, and to understand potential failures and their impact on overall BOP system reliability, potentially contributing to downward failure trends. Accordingly, BSEE determined that operators who desire to reduce the frequency of their regular testing should be required to adopt more robust BOP health monitoring capabilities to ensure that oversight of BOP operability is not compromised. Adopting a 21-day testing frequency would align BSEE requirements with the BOP testing provisions of API Standard 53 that are widely utilized and accepted internationally. A 21-day testing frequency would also align with widely adopted BOP testing standards followed by the international offshore oil and gas industry. BSEE contacted many international regulators[12] responsible for overseeing offshore operations and requested information on whether those regulators allow the use of a 21-day BOP testing frequency. BSEE was informed that, among others, Brazil, Denmark, the United Kingdom,[13] and the Netherlands allow a 21-day BOP testing frequency. BSEE recognizes the successful international use of the 21-day testing frequency and relied, in part, on that experience to support its decision that a 21-day testing frequency may be appropriate for OCS operations under certain conditions.

[12] Canada-Nova Scotia Offshore Petroleum Board (CNSOPB), Canada-Newfoundland and Labrador Offshore Petroleum Board, Danish Offshore Oil and Gas, United Kingdom, Brazil ANP (National Agency of Petroleum, Natural Gas and Biofuels), Norway PSA (Petroleum Safety Authority), and Australia National Offshore Petroleum Safety and Environmental Management Authority.

[13] http://www.hse.gov.uk/offshore/ed-well-control.pdf

BSEE also requires additional specified function testing of certain BOP components. For example, existing § 250.737(d)(9) requires BOP function testing of annular and pipe/variable bore rams every 7 days. This function testing would continue to confirm important aspects of BOP functionality at more frequent intervals if pressure testing is conducted at a 21-day frequency.

In addition, one commenter submitted an analysis of field pressure testing data across two rigs with similar BOP equipment – one subject to 14-day testing under requirements applicable in the Gulf of Mexico and the other on a 21-day testing cycle overseas. The commenter's analysis indicates that no reduction in BOP reliability was found in connection with the international 21-day testing standards. BSEE reviewed the commenter's data and agrees that the commenter's analysis demonstrates successful use of 21-day BOP testing.

Summary of comments - 21-day BOP testing frequency in the economic and environmental analyses:

Multiple commenters questioned the validity of BSEE's cost and environmental analyses and asserted that BSEE did not provide any concrete data or analysis to support a change to the BOP testing frequency in the regulations.

- **Response**: BSEE disagrees with the commenters' assertion that the draft economic and environmental analyses released with the proposed rule were invalid. BSEE reviewed all relevant comments related to these analyses and updated or revised them, as appropriate, for the final rule (see discussions of the 21-day testing provisions in the environmental assessment and Regulatory Impact Analysis).

D. BSEE Approved Verification Organization (BAVO)

The 2016 WCR established criteria and associated requirements related to the use of BAVOs. Pursuant to the regulations promulgated through the 2016 WCR, a BAVO is an entity that submits qualifications to BSEE and receives BSEE approval in order to perform certain independent engineering reviews and provides reasonable assurances that certain equipment would perform as designed under the operating conditions relevant to the particular well where the equipment will be used. The 2016 WCR regulations at §§ 250.731, 250.732, 250.734, 250.738, and 250.739 covered BAVO requirements. The 2016 WCR established that the BAVO requirements would not take effect until 1 year after BSEE published a list of BAVOs. BSEE has not yet published a BAVO list; accordingly, the BAVO requirements are not currently effective. However, the 2016 WCR also required that operators use independent third-parties to perform certain of the certifications, verifications, and reporting functions pending implementation of the BAVO requirements.

In the proposed rule, BSEE proposed to remove all references to BAVOs and to replace them with references to an independent third party in §§ 250.731, 250.732, 250.734, 250.738, and 250.739. BSEE received many comments supporting these proposed changes. This section includes a summary of the general BAVO-related comments and BSEE responses. For additional discussions of comments associated with BAVO-specific provisions and BSEE responses, refer to section V of this final rule preamble.

Summary of comments: Multiple commenters expressed concerns that changing BAVO requirements in the new rule would negatively affect safety and accountability. Multiple comments requested keeping the requirement for BSEE to certify BAVOs, as described in the 2016 WCR. Those commenters desired assurance that the third-party will be well-qualified for the extremely important work that is required, which includes verifying and documenting the proper functioning of the BOP. A commenter requested that BSEE explain how it will ensure that third-party reviewers are truly independent, qualified, and consistent in their execution of inspections and establish a process to evaluate the independent third parties. Another commenter recommended that BSEE not surrender the authority to approve the third-party organizations. A different commenter asserted that BSEE cannot avoid the responsibilities it has to ensure drilling safety by allowing inspections by organizations that may not have the expertise or capacity to determine whether blowout preventers are being correctly operated and maintained. Another commenter asserted that this change would reduce oversight, suggesting that if BSEE does not have a role in approving the inspectors, the operators would be able to choose who inspects their BOPs, and that such inspectors would not even be required to be present during inspection. One commenter asserted that reports prepared by a third-party that is not present during the actual inspection would be of minimal value and be too late to affect real change/improvement.

- **Response**: BSEE does agree that the independent third-parties need to be qualified to perform the required work. The independent third-party must have the qualifications listed under § 250.732(b), which requires the independent third-party to be a technical classification society, or a licensed professional engineering firm, or a registered professional engineer capable of providing the required certifications and verifications. As BSEE described in the preambles to the 2016 WCR and the proposed rule, BSEE expected most of the companies or individuals that would be approved as BAVOs to be drawn from the group currently being used as independent third-parties. BSEE determined that, under these circumstances, submittal to become a BAVO would be unnecessary and would not provide significant meaningful improvements to safety or environmental protection. BSEE has increased its interaction with the independent third-parties to better understand how they operate and carry out certifications and verifications. For example, BSEE engineers and inspectors are regularly on a rig or at a testing facility concurrently with independent third-parties during BOP testing. BSEE utilizes these opportunities to observe the independent third-parties and discuss the required verifications for the associated operations with them. If BSEE becomes aware of any concerns with the required independent third-party certifications or verifications, there are still options for BSEE to address the issues through the operator (*e.g.*, verifications through the permitting process).

BSEE disagrees with the assertions that BSEE is surrendering authority to approve third parties, that BSEE is avoiding responsibilities for ensuring safety, or that the changes reduce oversight. The regulatory revision that eliminates the BAVO process will continue to meet the objectives BSEE stated in 2015: "The objective is to have this equipment monitored during its entire lifecycle by an independent third-party to verify compliance with BSEE requirements, OEM recommendations, and recognized engineering practices. The BSEE believes that the importance and complexity of BOP systems and the fact that they might be operated at various worldwide locations throughout their service life warrants a thorough and regular assessment of the systems and verification that design, installation, maintenance, inspection, and repair activities are documented and traceable." (WCR, 80 FR 21504).

Although the regulations allow operators to select the independent third party who performs the inspection, there are multiple paths by which BSEE can directly verify the adequacy of independent third party performance. For example, BSEE will continue to review the verifications and certifications submitted by independent third parties and confirm that they provide a sufficient level of detail to ensure compliance with the regulations. Since 2015, BSEE has consistently articulated the importance of independent third-party verification and documentation. This regulatory amendment does not eliminate or reduce the role of such verification and documentation. While the regulations do not require the independent third party to be present at the major inspections, they require the independent third party to review the documentation of the inspections to help ensure that the appropriate entities accurately and appropriately complete the inspection and maintenance. The independent third party document review also allows the comparison of the design data to the current status of the equipment. The intent of the major inspection is to verify that the well control system components are fit for service and within design tolerances to be utilized for specific well conditions, which can be verified through a data review and does not require a physical presence.

Summary of comments: Commenters suggested that BSEE should take steps to ensure that any third-party is acting in good faith before it verifies rig safety measures and that BSEE should provide additional explanation and justification to support the proposed change.

- **Response**: BSEE agrees with the commenters that the independent third-parties must act in good faith and be capable and competent when conducting the required verifications and certifications. The qualification requirements set forth in final § 250.732(b) are designed, in part, to ensure such professional standards. If BSEE becomes aware of any concerns with certifications or verifications that are performed by an independent third-party as required by the regulations, BSEE retains options to address these potential issues through its regulation of the operator (*e.g.*, verifications through the permitting process).

Summary of comments: A commenter asserted that the proposed definition of independent third-party is too broad and would allow organizations or individuals to perform verification activities without having the proper expertise. The commenter recommends retaining and applying the current BAVO requirements found in previous § 250.732(a)(3)(i) through (vi) to potential independent third-parties.

- **Response:** BSEE disagrees with the commenter's suggestion to include the identified BAVO requirements in this final rule. Final § 250.732 paragraph (b) references the independent third party qualifications. The existing regulations do not require a BAVO to be a technical classification society, a licensed professional engineering firm, or a registered professional engineer capable of performing the required actions; however, for an individual or company to become an independent third-party that performs the required certifications and verification under this final rule, it must continue to meet the qualifications currently set forth in § 250.732(a)(2) and being retained in the final rule at § 250.732(b). These standards ensure a level of professional competence and independence comparable to that required of BAVOs in the existing regulations.

E. Legal Comments

General comments on legal aspects of the rulemaking process

Summary of comments: BSEE received a number of comments regarding the rulemaking process. Some commenters raised specific concerns about the process. For example, a commenter asserted that BSEE engaged in an inadequate information-gathering process. Several others claimed the public comment period was too short, and did not involve enough participation from stakeholders. Other commenters expressed support for the rulemaking process, asserting that this rule would address perceived deficits in the previous rule.

- **Response**: BSEE disagrees with the assertion that the bureau provided an unreasonably short public comment and that BSEE engaged in an inadequate information gathering process. As previously discussed, BSEE held a public forum on September 20, 2017, in Houston, Texas, prior to initiating the rulemaking process, to solicit input on the development of the proposed rule. In addition, BSEE accepted comments through a "Request for comments" on the Department of the Interior's regulatory reform initiatives, published in the *Federal Register* on June 22, 2017 (82 FR 28429), with no deadline for comments. BSEE received 19 comments relevant to this rulemaking from interested parties as a result of this request for comments. BSEE published the proposed rule with a 60-day comment period that was scheduled to close on July 10, 2018, and extended that comment period by 27 days to August 6, 2018. BSEE determined that this 87 day comment period on the proposed rule was reasonably sufficient because it afforded interested parties a meaningful opportunity to participate in the rulemaking process.

Compliance with the Administrative Procedure Act (APA)

Summary of comments: A commenter asserted that if BSEE chooses to publish a final rule, then it must first provide analysis and data upon which the proposed rule is based, in compliance with the fair notice requirements of the Administrative Procedure Act (APA), asserting that the APA requires BSEE to provide specific revisions with data and analysis supporting those proposals and to request further public comments on those specific proposed revisions, rather than simply ask for comments on a broad range of topics. The commenter asserted that there are several places in the proposed rule where BSEE solicits comments for amending certain existing provisions but provides no specific plans for how it intends to amend those provisions and asserted that without a defined course of action, the public cannot intelligently critique the proposed rule. The commenter asserted that BSEE did not include the analysis or data on which other proposed revisions are based, thus precluding meaningful public criticism.

- **Response:** BSEE disagrees. The APA's notice and comment provision (5 U.S.C. 553(b)) requires that an agency test its regulation through exposure to diverse public comment and give affected parties an opportunity to develop evidence in the record to support their positions regarding the rulemaking, thereby enhancing the quality of agency decisionmaking.[14] As evidenced by BSEE's receipt of diverse, extensive public comments, the proposed rule fairly apprised interested parties about the rule's detailed subjects and the range of alternatives the bureau was considering. BSEE's evaluation of the comments it received permitted the bureau to test these final regulatory provisions. Through this rulemaking process, BSEE provided ample and adequate notice of the potential for each regulatory change implemented through this final rule and ensured that the rulemaking record included adequate justification for each such change.

  With regard to revisions to the BOP system testing requirements, BSEE solicited comments in the proposed rule "on whether the BOP testing interval should be 7 days, 14 days, or 21 days for all types of operations including drilling, completions, workovers, and decommissioning," as well as comments "on the specific cost and operational implications of each testing interval."[15] Contrary to the commenter's assertion, BSEE specifically discussed industry's and BSEE's current reliance on function and hydrostatic tests and industry's concerns "related to the benefits of pressure and functional testing of subsea BOPs when compared to the costs and potential operational issues."[16] BSEE requested comments on

[14] Prometheus Radio Project v. F.C.C., 652 F.3d 431, 449 (3d Cir. 2011), certiorari denied 567 U.S. 951 (2012).
[15] 83 FR 22143 (May 11, 2018).
[16] Ibid.

these specific tests and intervals, including “[u]nder what circumstances or environments … the testing frequency [should] be increased or decreased,” and what “technologies, processes, or procedures can be used to supplement existing requirements and provide additional assurances related to the performance of this equipment.” BSEE did not propose the regulatory text adopted in the final rule regarding BOP testing frequency. However, BSEE discussed all of the final rule elements in the proposed rule, and a reasonable commenter could have anticipated the adopted changes and the text of the final rule BOP testing frequency provisions was a logical outgrowth of the proposed rule. BSEE specifically requested comments on whether the BOP testing interval should be 21 days for all types of operations, including associated costs and operational considerations, and highlighted questions surrounding the benefits of current testing requirements compared to known concerns. 83 FR 22143. BSEE specifically requested comments on circumstances in which testing frequency might be decreased and alternative approaches to ensuring the operability and reliability of BOP systems. *Id*. BSEE derived the final regulatory changes from comments received pursuant to the solicitations in the proposed rule. The final rule’s BOP testing interval constitutes a logical outgrowth from the proposed rule because interested parties should have anticipated that this change was possible and, in fact, filed relevant comments.[17]

Enforcement of Compliance with Documents Incorporated by Reference

[17] “A rule is deemed a logical outgrowth if interested parties ‘should have anticipated’ that the change was possible, and thus reasonably should have filed their comments on the subject during the notice-and-comment period.” *N.E. Maryland Waste Disposal Auth. v. E.P.A.*, 358 F.3d 936, 952 (D.C. Cir. 2004) (internal cites omitted). *See also, CSX Transp., Inc. v. Surface Transp. Bd.*, 584 F.3d 1076, 1081 (D.C. Cir. 2009) (“[A] final rule represents a logical outgrowth where the NPRM expressly asked for comments on a particular issue or otherwise made clear that the agency was contemplating a particular change.”)

Summary of comments: A number of commenters asserted that, by relying on incorporation by reference of industry standards, the proposed rule would allow the oil and gas industry to regulate itself without government oversight.

- **Response**: BSEE disagrees. As discussed elsewhere in this final rule, BSEE incorporates technical standards by reference in accordance with the requirements of the National Technology Transfer and Advancement Act (NTTAA)[18] and implementing Office of Management and Budget (OMB) guidance, the Office of the Federal Register (OFR) regulations (1 CFR part 51), and BSEE's own procedures for incorporation (§ 250.115, *What are the procedures for, and effects of, incorporation of documents by reference in this part?*). These processes include thorough evaluation of the pertinent standards for appropriateness and adequacy as regulatory requirements. The effect of incorporation by reference of an industry standard into the regulations is that the incorporated document becomes a regulatory requirement, *see* § 250.115(c), and, thus, becomes subject to BSEE oversight and enforcement in the same manner as other regulatory requirements. BSEE incorporates standards developed by SDOs with a preference for those standards that are developed using a consensus process. Furthermore, BSEE may incorporate portions of SDO standards, limit their applicability to specified sections of BSEE's regulations, and impose other limitations such as providing that where a provision of an incorporated standard conflicts with BSEE regulatory provisions, those regulatory provisions prevail. If an SDO later revises a standard that BSEE has previously incorporated in a final rule, BSEE would need to evaluate the revised standard before incorporating it through rulemaking in the

[18] National Technology Transfer and Advancement Act, 15 U.S.C. 370 *et seq*.

regulations; in other words, industry itself cannot change the regulatory requirements by revising a standard after that standard is incorporated in BSEE's regulations. Nor is industry authorized to oversee or enforce compliance with standards once incorporated into regulation. Once incorporated, BSEE enforces these standards as any other regulatory requirement.

Correcting issues from the 2016 rulemaking process

Summary of comments: A commenter asserted that this proposed rule corrected a failure in the 2016 WCR to provide a Statement of Energy Effects, as required by E.O. 13211. According to the commenter, E.O. 13211 required BSEE to publish for public comment a detailed statement relating to (1) "any adverse effects on energy supply" and (2) "reasonable alternatives to the action." A commenter claimed that the proposed rule makes adjustments to the 2016 rule to provide "economically feasible" regulations as required by OCSLA. [19] A commenter asserted that a detailed evaluation of "reasonable alternatives" to the 2016 WCR "would necessarily have included use of consensus standards." According to this same commenter, BSEE's recent cost impact assessment of the 2016 WCR found needless waste under certain provisions of the rule, leading to "idled rigs, unnecessary new equipment, unnecessary reporting, non-productive time, and lost production opportunities, all of which have no offsetting benefit to safety or environmental protection." This commenter contended that the proposed rule included adjustments to the 2016 WCR that provide economically feasible avenues for reaching the safety and environmental goals required by OCSLA. One commenter asserted that E.O. 13211 is unconstitutional, so any reliance on it is unlawful.

- **Response**: BSEE's articulation of its 2016 position with respect to the applicability of

[19] The commenter cited 43 U.S.C. 1347(b) as the basis for its assertion. BSEE-2018-0002-0050 Attch. 1 (p. 3).

E.O. 13211 to the 2016 WCR constitutes the best evidence of the bureau's position.[20] The OCSLA provision cited by the commenter addresses economic feasibility with respect to the use of certain technologies during OCS operations, not with respect to the economic feasibility of regulatory updates.[21] This rulemaking does not make a determination regarding the economic feasibility of any technology under 43 U.S.C. 1347(b). As explained in more detail in section I of this final rule preamble, E.O.s 12866 and 13563 direct BSEE to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select a regulatory approach that maximizes net benefits (accounting for the potential economic, environmental, public health, and safety effects). As a general matter, BSEE informs its decision-making with respect to rulemaking through fulfillment of the requirements of the APA and associated regulations and guidance.

Comments on other legal issues

Summary of comments: A commenter asserts that the agency cannot adopt new revisions in the final rule based on solicited comments when the agency did not propose those revisions in the proposed rule nor provide an opportunity for public comment on those revisions.

- **Response:** BSEE disagrees. BSEE decision-making regarding regulatory revisions is governed by the requirements of the APA and associated regulations and guidance. BSEE has complied with the notice and comment requirements of applicable law with respect to all provisions of the final rule. Any provisions not specifically proposed in the proposed rule reflect existing requirements and/or are logical outgrowths from the

[20] 81 FR 25888, 26013 (April 29, 2016).

[21] 43 U.S.C. 1347(b) states, in part: "[The Secretary] shall require, on all new drilling and production operations and, wherever practicable, on existing operations, the use of the best available and safest technologies which the Secretary determines to be economically feasible . . . ."

proposed rule.

Summary of comments: A commenter asserted that BSEE must perform a Quantitative Risk Analysis (QRA) before BSEE can realistically conclude that the changes ensure safe operations. In addition, the commenter asserted that BSEE must evaluate the significant environmental impacts of the rulemaking by preparing an Environmental Impact Statement (EIS). The commenter based this assertion on the requirement under the National Environmental Policy Act (NEPA) to take a "hard look" at the cumulative impacts the rulemaking would have on water resources, wildlife, coastal habitats, marine species, air quality, and sociocultural and economic systems, including direct and indirect impacts. The commenter also asserted that the rulemaking requires BSEE to undertake Endangered Species Act (ESA) consultations because removing certain regulatory provisions regarding environmental and worker protections may affect listed species and critical habitat.

- **Response**: BSEE disagrees with the claim that a QRA is the only way for BSEE to conclude that these changes ensure safe operations. As more fully discussed in the final Environmental Assessment (EA), NEPA requires that BSEE take a "hard look" at the potential impacts of a rulemaking, however it does not specifically require a QRA. BSEE took its "hard look" through the final EA, and reached a Finding of No Significant Impact (FONSI), demonstrating that an EIS is not required. Further, before any actual operations can be conducted on the OCS, there are a number of additional stages (e.g., leasing program, lease sales, planning, permitting) at which additional analyses of potential impacts are and will be performed. In addition, guidance in OMB Circular A4 regarding the preparation of a regulatory impact analysis (RIA) for significant rulemakings states that agencies "should seek to use more rigorous approaches with higher consequence rules." BSEE evaluated the recommendations from the stakeholders and commenters, considering a number of factors including risk, benefits, and cost. As previously discussed, consistent with congressional encouragement, BSEE solicited input from stakeholders early in this rulemaking process to identify those provisions of the existing regulations that BSEE could amend, revise, or remove to reduce unnecessary burdens on stakeholders while still maintaining safety and environmental protection. BSEE generally focused on those provisions in the existing regulations that did not significantly enhance worker safety or environmental protection.

With respect to ESA consultation, BSEE considered the ongoing Section 7 ESA consultations with the U.S. Fish and Wildlife Service, and whether this rule would affect any listed species or habitat. The National Marine Fisheries Service expressly excluded this rule making from the ongoing programmatic consultation. The final rule would not give rise to any additional or modified activities that would affect listed species or designated critical habitat. BSEE has determined that the final rule will have "no effect" on listed species or designated critical habitat. BSEE has determined that ESA consultation is therefore not required for this rule.

Comments on Best Available and Safest Technology (BAST) requirement in OCSLA

Summary of comments: A commenter emphasized that OCSLA requires BSEE to ensure that operators use "the best available and safest" technology (BAST) possible, unless BSEE determines that the narrow impracticability exception applies. The commenter asserted that BSEE failed to ensure or otherwise determine that the proposed rule meets these requirements. This commenter asserted that before BSEE may rescind and revise technological requirements that were determined to meet the requirements of BAST, BSEE is obligated to demonstrate compliance with BAST by ensuring that those revisions are as good as the original requirements. The commenter maintained that BSEE may not adopt the proposed revisions without a determination that the benefits of the original provisions are clearly insufficient to justify the incremental costs of implementing these technologies. This commenter asserted that BSEE must provide information demonstrating that the rulemaking will meet the BAST requirements of OCSLA.

A commenter urged BSEE to expeditiously finalize its consideration of the potential revisions to § 250.107.

- **Response**: The Conference Report regarding OCSLA's BAST provision[22] explains that that this provision requires the Secretary to make a "determination as to what are the best available and safest technologies economically feasible . . . ."[23] Neither the 2016 WCR nor this rule made or makes any such determination with respect to any specific technology. Therefore, in this rule, the Secretary has not undertaken any BAST evaluation of economic feasibility of any specific technology, nor did the Secretary do so in the context of the 2016 WCR (*see, e.g.*, 81 FR 25901; 25911; and 25929). Thus, the BAST statutory requirement does not apply here because this rulemaking makes no BAST determinations, nor does it alter any existing BAST determinations. The BAST statutory requirement is independent from OCSLA's provisions establishing the Secretary's authority to promulgate regulations to govern OCS operations.[24]

Comments on grounds for decisions

[22] 43 U.S.C. 1347(b).
[23] Conf. Rpt. 95-1091 (Aug. 10, 1978) (p. 109).
[24] 43 U.S.C. 1334(a) states, in part: "The Secretary shall . . . prescribe . . . regulations as may be necessary to carry out [OCSLA]. The Secretary may at any time prescribe and amend such . . . regulations as may be necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the [OCS], and the protection of correlative rights therein . . . ."

Summary of comments: A commenter asserted that BSEE failed to meet the APA's legal standards and argued that BSEE must provide "the grounds of its decision and the essential facts upon which the administrative decision was based," and "good reasons" for the proposed changes in policy, explaining the reasons why BSEE disregarded the "facts and circumstances that underlay or were engendered by" the prior rule. The commenter asserted that BSEE needs to provide a more detailed justification, providing "reasoned explanation." The commenter also asserted that it is arbitrary and capricious for BSEE to assume that the proposal to repeal regulations, that two years ago BSEE found would provide significant societal benefits, will not have an effect on societal costs and benefits.

- **Response**: BSEE disagrees. The APA's provisions regarding notice and comment (5 U.S.C. 553(b) and (c)) require that an agency test its regulation through exposure to diverse public comment and give affected parties an opportunity to develop evidence in the record to support their positions regarding the rulemaking, thereby enhancing the quality of agency decisionmaking.[25] BSEE provided thorough and reasoned explanations for its proposed regulatory actions and submitted them to public comment. BSEE's evaluation of the comments it received permitted the bureau to test these final regulatory provisions. Through this rulemaking process, BSEE provided ample and adequate notice of each regulatory change implemented through this final rule and ensured that the rulemaking record included adequate justification for each such change. Further, BSEE undertook its review of the provisions of existing regulations as promulgated through the 2016 WCR pursuant to the direction of multiple Executive Orders and Secretary's Orders, as well as congressional direction. Thus, BSEE

[25] Prometheus Radio Project v. F.C.C., 652 F.3d 431, 449 (3d Cir. 2011), certiorari denied 567 U.S. 951 (2012).

faithfully implements OCSLA and fully complied with procedural legal requirements, including those applicable to this rulemaking.

Comments on weakening of requirements

Summary of comments: One commenter strongly opposed the proposed rule, asserting that the proposal to weaken the existing well control regulations, just two years after they were promulgated, and before some provisions of the regulations are effective, would increase the likelihood of another *Deepwater Horizon* disaster. The commenter observed that the previous rulemaking was specifically designed to prevent another scenario similar to the *Deepwater Horizon* event. The commenter stressed that this action would "epitomize an arbitrary and capricious reversal of position."

- **Response:** The APA requires that BSEE give a "general statement of [the regulations'] basis and purpose." (5 U.S.C. 553(c)). As previously described, BSEE broadly based this rulemaking on congressional guidance, interaction with stakeholders, BSEE's experience implementing the 2016 WCR, BSEE's recognition of technological advancements, and directions contained in Executive and Secretary's Orders issued subsequent to the 2016 WCR. Pursuant to those Orders, BSEE evaluated existing regulatory provisions to identify unnecessary regulatory burdens, but always within the bounds of maintaining safety and environmental protection. BSEE believes that its process accomplished these goals without "weaken[ing]" existing regulation or failing to maintain safety and environmental protection. BSEE's articulation of these sound reasons for its regulatory decisions demonstrates that it is not acting arbitrarily or capriciously.[26] BSEE disagrees with the commenter's assertion that this rule would

[26] See, Natl. Indus. Sand Ass'n v. Marshall, 601 F.2d 689, 717 (3d Cir. 1979).

increase the likelihood of an event similar to DWH. As discussed in section D of this preamble, this rulemaking reduces regulatory burden while maintaining safety and environmental protection.

F. Economic Comments

Comments on cost and benefits

Summary of comments: Some commenters made assertions regarding the cost/benefit aspects of the proposed rule as presented in the initial regulatory impact analysis (IRIA). These comments were varied in scope and in position. Some commenters supported the overall conclusion of the IRIA, that BSEE is alleviating unnecessary regulatory burdens on industry with no foregone benefit to the public. Many commenters challenged this conclusion, both for the rule as a whole and with respect to some of the individual provisions. Commenters often supported their claims with descriptions in the 2016 WCR or by highlighting statements from the multiple investigative and engineering studies following the *Deepwater Horizon* incident in 2010.

Most comments did not challenge the IRIA's methodology or the compliance cost or savings estimates. Commenters that noted these did so generally, usually in the context of added risks or foregone benefits to the public. In other words, commenters mostly accepted the compliance savings estimates in the IRIA, but asserted that it was incomplete and that BSEE essentially ignored the "benefit" part of a cost-benefit analysis. On this basis, one commenter challenged BSEE's "neutral" designation for safety and environment impacts, claiming it treats foregone benefits as having zero value. The commenter further asserted, "BSEE must analyze and monetize the forgone societal benefits from [the proposed rule] that it analyzed and monetized in 2016, including the risk reduction benefits." In the absence of such an analysis, a separate commenter asserts that, "BSEE provides no evidence that the existing rule *is* actually a burden or that removing safeguards will ensure adequate protections remain in place." Further comments suggest the savings estimates presented in the IRIA are insignificant in comparison to the billions in gross domestic product (GDP) generated by the coastal communities placed at greater risk if this rule is finalized -- a risk, commenters note, BSEE did not evaluate. Variations of these claims are found in multiple comments.

- **Response:** The 2016 WCR did not make specific claims regarding the reduced risk created by the provisions in that rulemaking. A breakeven analysis of the rule's total compliance costs claimed only that BSEE believed the risk reduction was greater than one percent. This final rule does not modify or change the overwhelming majority of the provisions codified in the previous rulemaking. Further, BSEE identified the changes being made specifically because they maintain safety and environmental protection, and the societal benefits associated therewith. The revisions made through this rulemaking exemplify that there are multiple approaches to maintaining safety and environmental protection, and the associated societal benefits. As discussed in the "Section-by-Section Summary" discussions in this preamble, this final rule leaves in place several of the provisions proposed for revision in the proposed rule. The final rule focuses only on those provisions that are expected to reduce unnecessary burdens on operators, while still maintaining safety and environmental protection. Accordingly, BSEE has adequately incorporated those benefits into its formulation of this final rule.

Comments on compliance costs or savings estimates

Summary of comments: BSEE received few comments on compliance cost or savings estimations in the IRIA. One commenter resubmitted a cost analysis prepared for the 2016 WCR to support the position that BSEE should revise additional provisions not included in the proposed rule. Similarly, a separate commenter highlighted an unspecified cost burden related to the retention period of real-time monitoring data as defined by a provision not proposed for revision in the proposed rule.

- **Response:** BSEE's rulemaking process revises only the provisions identified in the proposed rule and changes that would be considered a "logical outgrowth" of the proposed rule. These comments suggested that BSEE should revise provisions that it did not propose for modification in the Notice of Proposed Rulemaking (NPRM) and that it did not analyze in the IRIA. BSEE considers the suggestions made in these comments to be outside the scope of this rulemaking.

Comments on the elimination of BAVO requirements

Summary of comments: Regarding elimination of the BAVO framework, a commenter asserted that, based on the supporting RIA for the 2016 WCR, "BSEE estimated that the BAVO system would result in a mere $10,000 in annual costs to operators and verification organizations. BSEE has provided no evidence that such a small annual cost outweighs the critical benefits of the BAVO system."

- **Response:** As discussed previously, BSEE concluded that the use of independent third parties will provide the same level of safety as the BAVO framework. Implementation of the BAVO framework would also impose meaningful costs and burdens on BSEE. BSEE considers any compliance cost that does not contribute to safety or environmental protection burdensome and therefore believes it is appropriate that the regulatory impact analysis reflect a compliance savings and no foregone public benefit.

Comments on lack of a risk analysis or risk assessment and financial analysis

Summary of comments: Several comments asserted that the proposed rule lacks sufficient risk analysis and asserted that additional analyses are required, while other commenters stated they were satisfied with the proposed risk assessment.

One commenter asserted that BSEE claimed the proposed rule would not cause a major increase in costs or prices for: consumers; individual industries; Federal, State, Tribal, or local governments; or regions of the nation. The commenter then asserted that these conclusions do not consider the risk of another spill like *Deepwater Horizon* or consider the impacts of that event related to the shutdown of fishing and tourism businesses for months or longer. The same commenter noted that according to BSEE, the proposed changes would reduce regulatory costs over a 10-year period at a rate less than $1 billion total, which the commenter asserted is a relatively small amount when compared to the damage of one oil spill.

Another commenter made a similar assertion regarding BSEE's position that the rule would not cause major increases in cost or prices, and asserted that this position does not address important risk factors. The commenter asserted that the proposed rule failed to account for foregone benefits along with the avoided costs. The commenter asserted that because the proposed revisions "would have a positive annual effect on the economy of $100 million or more," this rulemaking is subject to the cost-benefit analysis requirements under E.O.s 12866 and 13563, as well as OMB Circular A-4. The commenter asserted that BSEE claimed it has conducted the required analysis, but argued that while BSEE's analysis quantifies industry's anticipated reduction in compliance costs, it does not address the foregone benefits of protections against the types of spills that have cost billions of dollars to remediate. The commenter further asserted that BSEE simply stated that, "[t]he proposed amendments would not negatively impact worker safety or the environment." The commenter observed that the economic analysis conducted for the 2016 WCR "quantified and monetized the potential benefits of the rule, including time savings, reductions in oil spills, and reductions in fatalities."

One commenter asserted that the rulemaking is consistent with the Executive and Secretary's Orders, in that the rulemaking would remove undue burdens on operators. The commenter supported BSEE's assertion that the proposed rule would increase the competitiveness of America's offshore energy industry.

Another commenter asserted that the proposed rule would hold risk to an acceptable level and that the risk-based standards and procedures as currently used by operators are sufficient to maintain well control. The commenter asserted that operators can maintain well control and manage events safely when: wells are designed for the range of anticipated risk; equipment and safeguards have the required redundancy and are properly maintained and tested; personnel are trained; tests and drills are conducted; and established procedures are followed. The commenter emphasized the importance of highly skilled and trained personnel on location who are able to provide timely and effective well control and safety decision making. The commenter also recommended that BSEE consider these general operating practices when finalizing this and other regulations.

- **Response**: BSEE disagrees with the commenters' assertion that BSEE did not consider risk in the development of the proposed and final rule. BSEE evaluated operational considerations, equipment design and specifications, and relevant public input and comments to identify appropriate revisions. As previously discussed in this preamble, BSEE carefully considered potential changes to these regulations, under direction to identify possible revisions that would reduce unnecessary regulatory burdens on stakeholders, while still maintaining safety and environmental protection. As discussed qualitatively in the RIA, BSEE determined that the selected revisions are likely to maintain the same worker safety and environmental protection as the 2016 final rule, therefore BSEE did not evaluate the costs related to a potential increase in spills or safety issues. BSEE recognizes that pursuant to OMB guidance (OMB circular A-4),[27] agencies are encouraged to "seek to use more rigorous [economic analysis] approaches with higher consequence rules," *i.e.*, those rulemakings that are expected to have annual benefits and/or costs in the range from $100 million to $1 billion. BSEE recognizes that there is a potential relationship between a decrease in regulatory requirements and an increase in risks. However, during the rulemaking process, BSEE considered the potential impacts of contemplated revisions to safety and environmental risks to identify those revisions that would reduce burdens on operators while maintaining safety and environmental protection. While BSEE did not develop a specific risk analysis for this rulemaking, BSEE considered potential risks as part of the process of developing this rule and RIA. BSEE has a number of completed and ongoing efforts related to evaluating risk in OCS operations. BSEE considered information from these efforts when evaluating the requirements of the current well control regulations to identify requirements that could be revised while still maintaining safety and protection of the environment. Among the ongoing efforts considered by BSEE that address well control-related risk issues, are:

[27] *https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf*

1) The SafeOCS failure reporting program, and the "Blowout Preventions System Events and Equipment Component Failures" 2016 Annual Report and "Blowout Preventions System Safety" 2017 Annual Report on failures, by BTS. These reports include summaries and analysis of the data received through the SafeOCS program on BOP equipment component failures on the OCS and other key information, such as failure causes, operational impacts, and opportunities to improve data quality. More information on the SafeOCS reporting system and copies of the 2016 and 2017 BTS reports are available at: https://www.safeocs.gov/wcr_home.htm

2) Argonne National Laboratory (ANL) 2017 report and updated 2018 report on *Risk-Based Evaluation of Offshore Oil and Gas Operations Using a Multiple Physical Barrier Approach*. This project was designed to assist BSEE in developing a multiple physical barrier (MPB) model of risk analysis. The project resulted in a risk-analysis technique, developed by ANL, that focuses on the use of physical barriers to prevent hydrocarbon release. BSEE has used a multiple barrier approach as part of its approach to regulations for many years. This project supports that approach through the development of a formalized methodology for evaluating process safety, to ensure that *success paths* (*e.g.*, systems, components, and human actions needed to ensure the success (of a barrier)) are in place and are capable of performing their functions in all expected conditions and circumstances. The initial (2016) ANL project resulted in a joint industry project (JIP), a case study on plug and abandonment barriers. More information on this project and the two ANL reports is available at: https://www.bsee.gov/research-record/risk-based-evaluation-of-offshore-oil-and-gas-operations-using-a-multiple-physical.

Regarding the comments on BSEE's determination that the proposed rule would not cause a major increase in costs or prices, the revisions to the regulatory requirements in this final rule are expected to reduce unnecessary burdens, while still maintaining safety and environmental protection. The 2016 WCR did not make specific claims regarding the risk reduction created by the provisions in that rulemaking. A breakeven analysis of the rule's compliance costs claimed only that BSEE had concluded that the risk reduction was greater than one percent (81 FR 25987). This final rule does not modify or change the overwhelming majority of the provisions codified in the 2016 WCR. BSEE determined that the selected revisions are likely to maintain safety and environmental protection.

This final rule does not codify some provisions of the proposed rule. One example is the proposed revision to existing § 250.734(a)(1)(ii), which requires "both shear rams to be capable of shearing" the specified equipment run in the hole. BSEE proposed to change this provision to require only that a "combination of the shear rams must be capable of shearing" the specified equipment run in the hole. As previously stated, BSEE based the decision not to make that change in this final rule on consideration of the public comments on the proposed rule, the importance of shearing redundancy, and the potential ambiguity the change would create regarding the number of rams subject to this shearing requirement. For more information on specific proposed provisions that are not being codified in this final rule, refer to section V of this preamble.

Concerning the comment that recommended that BSEE consider these general operating practices when finalizing these and other regulations; BSEE agrees and does this routinely as part of developing regulations and policies. The incorporation by reference of industry developed standards in the regulations is one approach BSEE uses to address general operating practices used by the industry. Since these documents are developed by industry, they reflect common industry practices. BSEE also considered input from industry to identify those provisions from the existing regulations that were unduly burdensome, although this was not the only input that BSEE considered in determining how to revise these regulations.

Comments on potential safety impacts of proposed RTM revisions

Summary of comments: One commenter asserted that BSEE must ascertain whether removing certain provisions, such as RTM requirements, would increase the risk of human error, or remove a check on human error, regarding the need for an operator's offshore and onshore teams to come to consensus on how to proceed. The commenter also asserted that BSEE must provide quantitative risk analyses to support the proposed rule provisions, stating that such an analysis is critical to understanding whether BSEE's proposal to rescind such built-in safety checks would impermissibly undermine safety. The commenter also cited System Risk Assessment and Management (SRAM) as an approach that works effectively in other countries.

- **Response**: The final rule revises part of the existing RTM requirements, but does not entirely remove them. Section 250.724 paragraph (a) of the final rule continues to require RTM when operators conduct "well operations with a subsea BOP or with a surface BOP on a floating facility, or when operating in a high pressure high temperature (HPHT) environment." The operator must "gather and monitor real-time well data using an independent, automatic, and continuous monitoring system capable of recording, storing, and transmitting data." This includes data regarding the BOP control system, the well's active fluid circulating system, and the downhole conditions with bottom hole assembly tools.

The final rule continues to require operators to transmit such data as they are gathered in accordance with a real-time monitoring plan. The final rule requires that operators have the capability to monitor the data using qualified personnel. In addition, BSEE requires the operator to develop and maintain a real-time monitoring plan that meets certain specified criteria.

The final rule removes the language in existing § 250.724(b) discussing contact between onshore and offshore personnel and stating that, after completing operations, the operator must preserve and store these data for recordkeeping purposes as required in §§ 250.740 and 250.741, and must provide BSEE with access to the designated real-time monitoring data onshore upon request. The final rule also removes the requirement from § 250.724 that the operators include certifications that they have a real-time monitoring plan in their APD. These provisions are prescriptive, but unnecessary. The regulations still require the operator's RTM plan to describe how the data will be transmitted and monitored by qualified personnel, procedures for, and methods of, communication between rig personnel and monitoring personnel, and actions to be taken in the event of loss of communications. Further, the existing regulations (§§ 250.740 and 250.741) already specify recordkeeping requirements for all of Subpart G. BSEE also has the authority to request these records from the operators. Removal of these redundant or unnecessary requirements for storage of RTM data from § 250.724 do not remove the obligation for the operator to develop and implement an RTM plan, which includes a description of how the data will be stored; therefore, the change in risk is minimal and a quantitative risk analysis, as suggested by the commenter is not needed.

Regarding the commenter's mention of the SRAM, BSEE recognizes that there are numerous ways to approach risk assessments and may consider other approaches for future policies or regulations.

Comments on financial assurance

Summary of comments: A commenter asserted that operators should provide evidence of financial ability to plug wells and cover lost income, including the loss of income to those who rely on a clean ocean for their livelihoods.

- **Response**: BSEE assumes that this comment is related to financial assurance (bonding) issues. BSEE does not regulate financial assurance for the offshore oil and gas industry; the Bureau of Ocean Energy Management's (BOEM's) regulations at 30 CFR parts 553, *Oil Spill Financial Responsibility for Offshore Facilities* and 556, *Leasing of Sulfur or Oil and Gas and Bonding Requirements in the Outer Continental Shelf* address that responsibility.

G. Environmental Comments

Comments on the OCS Leasing Program

Summary of comments: A number of commenters addressed elements of the BOEM draft proposed 2019-2024 National OCS Leasing Program (Leasing Program). These commenters focused on the potential impacts of the proposed regulations in conjunction with the potential for oil and gas exploration and development in areas that could be opened for leasing under BOEM's proposed Leasing Program. One commenter asserted that BOEM's proposed expansion of leasing would entail the issuance of leases at a pace that exceeds the pace of recent leasing activities. The commenter further asserted that this would lead to an increase in the risk of spills, blowouts, and other consequences, and that the leases would be issued in areas where there is currently no oil and gas production and little or no production of oil and natural gas has taken place. The commenter asserted that the proposed rule would weaken the precautions in place to prevent these consequences just as offshore drilling would begin in areas that are not prepared to respond to spills.

Some comments asserted that the proposal in the Leasing Program to expand OCS leasing into additional geographic areas would magnify any reduction in safety and environmental protection resulting from the proposed revisions in this rulemaking. Some commenters asserted that BSEE must consider the impacts that the proposed rule would have under the expanded Leasing Program proposed by BOEM.

- **Response:** BSEE is aware of BOEM's Leasing Program. The proposed Leasing Program is a separate action by BOEM, which is a separate bureau from BSEE within the Department. The Leasing Program specifies the size, timing, and location of potential leasing activity that the Secretary determines will best meet national energy needs for the five-year period under consideration. The Leasing Program is subject to its own separate public comment processes and is beyond the scope of this rulemaking. While certain regulations apply exclusively to certain regions, the bulk of BSEE's regulations apply to the entire OCS regardless of location. As analyzed throughout, BSEE disagrees with the commenters' assertion that this rulemaking weakens the precautions to prevent spills and incidents. Accordingly, the impacts of this rule are not pertinent to commenters' concerns, and any concerns related to the expansion of operations into new areas should be directed toward BOEM's proposed Leasing Program, as that is not a subject of this rulemaking. Regardless of the BOEM leasing pace, BSEE permits operations on an individual well-by-well basis taking into account site-specific environmental and operational conditions to help ensure safety and environmental protection.

BSEE disagrees that the regulations are being weakened and it selected the revisions implemented through this rule based in part on the fact that they are likely to maintain the same level of safety and environmental protection for OCS activities as established by the 2016 final regulations. This rulemaking does not revise or reduce the oil spill response plan requirements.

General comments on environmental impacts

Summary of comments: Multiple commenters were concerned that the proposed rule would increase environmental impacts of drilling and other well operations, thus negatively affecting the environment. One commenter asserted that the penalties imposed for failures are insufficient to motivate operators to comply with the regulations. The commenter asserted that the 2016 WCR was overly conservative in its estimations of its environmental benefits. The commenter also asserted that BSEE admitted that it understated the environmental benefits when BSEE assumed that the rule would reduce oil spill risk by only one percent per year. The commenter asserted that this mistake is further compounded by the fact that BSEE relies on this erroneous one percent reduction of risk assessment in its costs reduction analysis for the proposed revisions to the regulations promulgated through the 2016 WCR. The commenter also asserted that a significant monetary imbalance exists between current civil penalties and operating costs; asserting that the penalties are too small to deter risk-taking and provide a financial incentive to disregard regulatory compliance. The commenter, however, acknowledged that BSEE cannot address this problem through regulations, and that Congress needs to mandate penalties that will discourage this behavior.

A different commenter expressed concern regarding how the proposed rule would negatively affect the environment. The commenter expressed opposition to any provisions of the proposed rule that would weaken requirements for decommissioning, such as possibly excluding decommissioning from RTM requirements. The commenter referenced a 2010 article by the Associated Press asserting that there are more than 27,000 sealed and abandoned oil and gas wells in the Gulf of Mexico, with more than 3,200 wells classified as active that have no cement plugging. The commenters asserted that these 3,200 wells pose a significant risk to the health of the Gulf and coastal communities because the factors that could lead to leaks are not being monitored. The commenter noted that in recent years, millions of dollars from *Deepwater Horizon* recovery and restoration funds were provided to state programs to safely plug abandoned wells. The commenter asserted that BSEE should strengthen requirements for decommissioning activities to prevent the risk of future leaks.

- **Response:** BSEE disagrees with the commenters' assertions that the selected regulatory revisions would negatively affect the environment. BSEE has determined that this rulemaking does not alter the baseline (2016 level) risk profile of the 2016 WCR, for the reasons specified in the rule and RIA. There are no benefits (forgone or otherwise) to quantify because the baseline risk profile is unchanged. Therefore, those forgone benefits are ultimately quantified at zero. In the EA, BSEE evaluated the revisions in this rulemaking to focus the impact analyses on those revisions that could potentially change operators' responsibilities for how they conduct their operations. The impact analysis focuses on the likely impacts associated with a possible loss of well control, discharges of hydrocarbons to the environment, and air pollution emissions associated with testing activities. BSEE evaluated the impacts of the final rule provisions and determined that none of the provisions will significantly impact the quality of the human environment under NEPA (refer to the final EA and FONSI).

BSEE generally agrees with the commenters' assertions about the importance of civil penalties. However, those considerations are beyond the scope of this rulemaking. BSEE also agrees that the sufficiency of the maximum civil penalties allowable under OCSLA is a question that would need to be addressed by Congress. BSEE also generally agrees with the commenters' assertions about the importance of decommissioning. However, this aspect of decommissioning operations is also beyond the scope of this rulemaking.

Comments on the need for an EIS

Summary of comments: Multiple commenters recommended that BSEE should prepare an EIS. These commenters asserted that the environmental impacts discussed in the draft EA are significant in scope and intensity and that the impacts of a catastrophic discharge would be severe. The commenters also asserted that the proposed rule would increase the risk of significant impacts; therefore, BSEE should prepare an EIS for this rulemaking. Another commenter asserted that the standard for triggering an EIS is low and that an EIS should be prepared when substantial questions are raised about whether a project may have a significant impact on the environment. A commenter also asserted that agencies must identify their methodologies, indicate when information is incomplete or unavailable, acknowledge scientific disagreement and data gaps, and evaluate indeterminate adverse impacts based on approaches or methods "generally accepted in the scientific community." Some commenters asserted that BSEE's utilization of an environmental assessment is unsupportable because of the potential effects from a possible catastrophic oil spill, like the Deepwater Horizon incident, and BOEM's plans to dramatically expand the scope of offshore drilling through the National OCS Program under development.

- **Response:** BSEE disagrees that the potential impacts of the rule are significant. BSEE used the best available scientific information to conduct a comprehensive review of the potential environmental impacts of the provisions of the proposed rule. More specifically, BSEE reviewed and incorporated the impact analyses from multiple existing environmental documents into the draft EA and determined that there were no significant environmental impacts associated with any of the NEPA alternatives considered, and, most importantly, with the provisions in this final rule. Furthermore, BSEE disagrees that the proposed rule would increase the risk of significant impacts. As previously mentioned, BSEE considered potential risks while developing the final rule. In particular, we concluded that the risk of a catastrophic oil spill is not increased by the regulatory revisions of this rule. These considerations included the public's input on the proposed rule and information from a number of BSEE efforts related to evaluating risk in OCS operations – such as BSEE's SafeOCS failure reporting program and the ANL report on *Risk-Based Evaluation of Offshore Oil and Gas Operations Using a Multiple Physical Barrier Approach*. These various sources of information led BSEE to identify changes to the regulations implemented through the 2016 WCR that would reduce regulatory burden while maintaining safety and environmental protection on the OCS. For example, the final rule does not include certain changes initially mentioned in the proposed rule that would have eliminated the requirement for both shear rams in a BOP to be capable of shearing specific equipment run in the hole and eliminated requirements related to pipe positioning for shear rams. Inasmuch as the impacts of the rule are either neutral or positive, the potential for expansion of the geographic area subject to leasing does not increase the risks to a level approaching significance. General statements of dissatisfaction with the draft EA's analyses or general statements regarding NEPA legal standards, do not assist BSEE in providing any supplemental analysis that could assist the public in understanding the potential environmental impacts of the final rule.

Comments on the Adequacy of Impacts Analysis

Summary of comments: A number of comments asserted that BSEE's analyses of impacts on environmental resources are inadequate. One comment asserted that BSEE's one-sided evaluation of economic impacts violates NEPA and that the analysis fails to address the "crippling economic consequences of failing to prevent an oil spill that could have been prevented under the 2016 well control rule." Another comment asserted that the draft EA fails to disclose and analyze impacts to water resources, wildlife on nearby habitats, air quality, sociocultural systems, commercial and recreational fisheries, tourism, and recreation, as well as cumulative impacts. The commenter also disapproved of BSEE's determination that consultation for threatened and endangered species is not necessary at this time. The commenter asserted that BSEE's conclusions are not supported by any qualitative or quantitative analysis and therefore fail to satisfy the hard look requirement of NEPA.

- **Response:** BSEE stands by the conclusions provided in the EA, while noting that BSEE used the best available scientific information to conduct a comprehensive review of the potential environmental impacts. This information includes multiple existing environmental analysis documents, listed in the next paragraph, as well as information received through public comment on the proposed rule and a number of BSEE efforts (*e.g.*, ANL studies) related to evaluating risk in OCS operations. As previously mentioned, the changes to the regulations promulgated through the 2016 WCR are limited only to those that would reduce regulatory burden while maintaining safety and environmental protection on the OCS. Those comments that express general dissatisfaction with the analyses do not provide any supplemental analysis that could assist the public in understanding the potential environmental impacts of the rule.

The project area evaluated in the EA is fully described in Chapter 3 of the EA, *Affected Environment*. The EA incorporates by reference baseline information regarding resources that are relevant to the operations conducted under the revised regulations from the Final Programmatic Environmental Impact Statement; Outer Continental Shelf Oil and Gas Leasing Program: 2017-2022; Final Environmental Impact Statement; Gulf of Mexico OCS Oil and Gas Lease Sales: 2017-2022; Gulf of Mexico Lease Sales 249, 250, 251, 252, 253, 254, 256, 257, 259, and 261; Final Programmatic Environmental Assessment of the Use of Well Stimulation Treatments on the Pacific Outer Continental Shelf: May 2016; and the Final Environmental Assessment; Oil and Gas and Sulfur Operations on the Outer Continental Shelf – Blowout Preventer Systems and Well Control: April 2016. BSEE rigorously evaluated and discussed in Chapter 4 of the EA, *Environmental Consequences*, the analyses of impacts on water resources, wildlife on nearby habitats, air quality, sociocultural systems, commercial and recreational fisheries, tourism, and recreation, as well as cumulative impacts, while noting that many of the quantitative and qualitative analyses are supported in the documents incorporated by reference.

In the EA, BSEE identified the scope of reasonably foreseeable activities that may be attributed to this rulemaking in order to estimate its environmental effects. BSEE acknowledges that there is some level of risk associated with offshore oil and gas activities; however the scope of this EA is limited to this rulemaking, which adopted changes to the current regulations that reduce regulatory burdens while maintaining safety and environmental protection.

The cumulative impacts analysis considered the baseline data included in Chapter 3, Affected Environment, which describes current conditions and past and ongoing impacts on the resources that could potentially be affected by the activities included under each alternative, as well as reasonably foreseeable future activities that should be taken into account. The EA appropriately describes and analyzes all of the current and reasonably foreseeable future impacts from other activities described in the Cumulative Effects section 4.5 of the EA based on the estimated negligible to small impacts attributed to promulgating the final regulations in this rulemaking under Alternative 4, and the small contribution to total cumulative impacts.

BSEE considered the ongoing Section 7 ESA consultations with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, and whether this rule would affect any listed species or habitat. The final rule would not give rise to any additional or modified activities that would affect listed species or designated critical habitat. BSEE has determined that the final rule will have "no effect" on listed species or designated critical habitat. BSEE has determined that ESA consultation is therefore not required for this rule.

H. Miscellaneous Comments

Comments on general safety issues

A number of comments discussed overall safety issues purportedly implicated by the rulemaking, not related to a specific proposed revision. Some commenters stated that they perceived that the proposed rule would improve the overall safety of operations, while others raised concerns that the proposed rule would decrease overall safety.

Summary of comments: Multiple commenters expressed support for the proposed rule's reliance on best management practices, innovation to increase safety and reliability, optimization of risk reduction, support for the nation's efforts to increase energy independence, and incorporation of API Standard 53. One commenter asserted that adoption of API Standard 53 would improve safety by aligning the regulations with actual industry practices; by incorporating the standard it would apply to operators, suppliers, and contractors; and that the standard would provide for timely introduction and management of new technology.

A commenter asserted that the economic production of crude oil and natural gas in the Gulf of Mexico is vital to the U.S. economy and American consumers. The commenter emphasized the importance of ensuring that any regulations BSEE adopts optimize risk reduction without making development and production uneconomic or unsafe.

A commenter asserted that new technologies can provide industry with operational information. The commenter asserted that the industry and BSEE recognize that technologies already exist, or are in development, that can provide operators with data regarding the equipment's performance. The commenter asserted that use of these and other emerging technologies, along with API Standard 53 failure reporting, may lead to advances that further improve safety and reliability.

- **Response:** BSEE agrees with the comments generally supporting the selected revisions**.** BSEE has reviewed all comments submitted and is revising the proposed rule as appropriate. BSEE responds directly to comments on specific provisions and discusses the final rule provisions in section V of this preamble.

Summary of comments: Several commenters asserted that the proposed rule failed to adequately demonstrate how it will protect safety. Another commenter asserted that the proposed rule allows operators to govern their own safety. The commenter asserted that the proposed revisions would allow a substantial degree of self-governance to the operators and that this is an industry that has demonstrated an inability to obtain oil in a safe, responsible way. The commenter referred to a recent series of surprise inspections of drilling rigs that revealed a number of major safety violations and asserted that several of the companies pushing hardest against the regulations were cited for violations more often than the industry average. A different commenter asserted that the proposed rule lacked adequate evidence that it would protect safety. This commenter asserted that BSEE must evaluate safety with respect to the different geographical environments where the oil and gas operations will occur. The commenter noted that different ocean environments present different constraints, challenges, and operational risks; and asserted that BSEE must evaluate whether the proposed revisions would ensure safety in all environments. The commenter further asserted that BSEE did not provide evidence that the existing regulations are actually a burden or that removing safeguards will ensure adequate protections remain in place. The commenter also asserted that the proposed rule did not provide sufficient analysis on how it would safeguard workers and protect the environment, but focused on assertions about reducing regulatory burdens for industry and burdensome paperwork for regulators. The commenter asserted that the proposed rule lacked any studies, investigations, reports, or public solicitations for information.

A commenter contended that the reduced oversight contemplated by the proposed rule would make losses of well control and oil spills more likely to occur. The commenter claimed that weakening safety regulations designed to prevent blowouts would further contribute to the already routine oil spills that will occur in the Atlantic if the Administration finalizes its plan to allow oil and gas development in that area. The commenter asserted that, if offshore drilling increases, the level of safety and prudence must also increase.

- **Response:** BSEE reviewed all comments submitted and is revising the proposed rule as appropriate. BSEE does not agree with the commenters' assumption that this rulemaking will allow the operators to govern their own safety. The use of various regulatory approaches in this rulemaking -- including the incorporation of standards; performance-based requirements; independent third parties instead of BAVOs -- increases the responsibilities on operators, but does not reduce BSEE's oversight responsibilities. BSEE continues to review and approve permit applications for specific activities and to inspect all OCS facilities for compliance with applicable law, regulation, plans, permits, and lease terms. Operator applications must contain appropriate information to demonstrate compliance with BSEE regulations, including any documents incorporated by reference. The incorporation by reference of industry standards does not mean the industry is self-regulating. BSEE participates in the development of many of the standards incorporated by reference. In addition, BSEE reviews and analyzes any standards incorporated in the regulations to ensure the documents provide for safety and environmental protection and are consistent with BSEE's authorities and policies. BSEE may supplement standards with specific regulatory provisions, if there are any places where the standards are lacking. Most importantly, once incorporated by reference, such standards are enforceable as any other regulatory requirement, and BSEE is responsible for oversight of compliance and enforcement -- it is not left to industry. Further, if industry modifies an incorporated standard, those modifications do not impact the regulatory requirements unless and until BSEE incorporates those modifications through a separate rulemaking.

The commenter referred to a recent series of surprise inspections of drilling rigs that revealed a number of major safety violations and asserted that several of the companies pushing hardest against the regulations were cited for violations more often than the industry average. BSEE regularly conducts unscheduled or “surprise” inspections of facilities on the OCS. BSEE is not certain whether this comment is referring to the regular unplanned inspections or a specific increased inspection effort. Regardless, BSEE normally inspects mobile offshore drilling units (MODUs) at least once every 30 days when they are in operation on the OCS. BSEE does not agree with the assertion that the companies most vigorously opposing the regulations were cited for violations more often than the industry average. BSEE did not consider the number of violations issued to specific operators when developing this rulemaking.

Regarding the concern that BSEE must evaluate safety with respect to the different geographic environments where the oil and gas operations will occur, BSEE agrees that differences in geographic environment can impact the nature of operations. This is reflected in the fact that certain of BSEE’s regulatory requirements are specifically tailored to particular geographic environments, such as the Arctic or frontier areas. Prior to receiving approval from BSEE to begin drilling operations on the OCS, an operator must submit an exploration or development plan to BOEM for approval. The exploration or development plan addresses operational considerations relevant to the specific location and operating environment (for more information on the content of exploration and development plans, go to: https://www.boem.gov/Submitting-Complete-Exploration-and-Development-Plans/). As part of the review of the APD, BSEE confirms whether the APD is consistent with the approved exploration or development plan, as well as consistent with the additional requirements applicable to such submissions, under the circumstances presented.

Concerning the commenter’s assertion that the development of the proposed rule did not include studies, investigations, reports, or public solicitations for information, BSEE disagrees. As previously discussed, BSEE considered questions that arose during the implementation of the 2016 WCR and the policies developed in response to those questions. In addition, BSEE solicited input from interested parties to identify potential revisions to the regulations; including the public forum held on September 20, 2017, in Houston, Texas. Further, BSEE received and considered a substantial amount of information from commenters through the APA notice and comment process. BSEE’s approach to this regulatory reform was to consider input from a variety of sources to make proposals that would carefully remove unnecessary burdens while leaving critical safety provisions intact.

Summary of comments: One commenter asserted that implementation of the proposed rule and adoption of a related procedure for checking well pressures as a standard industry practice would potentially have prevented a number of fatalities. This commenter recommended that

BSEE incorporate a specific safety procedure in the regulations, so it would become a standard industry practice.

- **Response:** BSEE received and assessed the comment and is not incorporating the commenter's suggested procedure into the regulations at this time. BSEE disagrees that it would be appropriate to require the commenters' identified specific procedures on all wells and rigs, and doing so would be beyond the scope of this rulemaking. BSEE may evaluate the procedures for possible inclusion in future rulemakings, if appropriate.

Comments on energy independence

Summary of comments: Some commenters expressed concern that BSEE is promoting increased drilling and energy independence at the expense of its obligations to protect the environment. One commenter asserted that BSEE's function is to promote safety and protect the environment. The commenter referenced BSEE's explanation in the proposed rule that the intention of this rulemaking is to fortify the Administration's position toward facilitating energy security leading to increased domestic oil and gas production and to reduce unnecessary burdens on stakeholders. However, the commenter asserted that it is not BSEE's duty to increase production of oil or gas. The commenter noted BSEE's mission statement that says its mission is to "promote safety, protect the environment, and conserve resources offshore through vigorous regulatory oversight and enforcement." The commenter asserted that it is inappropriate for BSEE to sacrifice its public trust obligations in favor of enhancing industry profits.

- **Response:** BSEE disagrees with the commenters' assertions that this rulemaking is promoting increased drilling and energy independence at the expense of BSEE's obligations to protect safety and the environment. BSEE recognizes its obligations to protect safety and the environment under OCSLA; however, as stated in § 250.101(b), and pursuant to 43

U.S.C. 1332(3). BSEE is also obligated to follow sound conservation practices to make OCS resources available for development to meet the Nation's energy needs. Applying sound conservation practices includes ensuring that the requirements in the regulations do not unduly burden responsible development and production of oil and natural gas resources, while maintaining safety and environmental protection. BSEE's responsibilities go beyond safety and environmental protection and extend to numerous aspects of the proper management of OCS oil and gas operations. In addition, as previously discussed, this rulemaking executes the mandates from the President and the Secretary, as set forth in E.O. 13783—Promoting Energy Independence and Economic Growth; E.O. 13795—Implementing an America-First Offshore Energy Strategy; and Secretary's Order No. 3350. BSEE disagrees that this rule fails to maintain safety and environmental protection and stands by its determination that every change made in this rule meets that standard.

Comments on conflicts of interest

Summary of comments: Some commenters took issue with the fact that BSEE incorporated input from interested parties in the proposed rule. The commenters claimed that the proposed rule would allow operators to provide their own oversight, while not acknowledging API's role as a lobbyist for the oil and gas industry. These commenters asserted that this creates a conflict of interest for these parties and for BSEE and that this would make losses of well control and catastrophic oil spills more likely. One of these commenters asserted that adopting standards developed by API creates a conflict of interest, because API is a major oil and gas industry trade association and lobbying firm. The other commenter views the performance-based standards in the proposed rule as poorly defined, claiming they should be clearly established before the final rule's publication. The commenter asserts that a number of provisions in the proposed rule regarding performance-based standards are extremely vague. This commenter opined that BSEE should have published an Advance Notice of Proposed Rulemaking (ANPR) to gather the information necessary to prepare a better defined proposed rule, if BSEE did not know which proposed standards to include.

Response: BSEE disagrees with the suggestion that BSEE should have published an ANPR before publishing the proposed rule. As previously discussed, when BSEE initiated its review of these regulations, BSEE held a public forum in Houston, Texas, which was attended by more than 110 interested parties. The participants of the public forum provided comments and suggestions before BSEE began the process of developing the proposed rule. BSEE likewise obtained useful input into the development of this rulemaking through the Department's "request for comment" on its overall regulatory reform initiatives. The proposed rule also served as an opportunity for BSEE to secure public comment and input.

As discussed previously, this rulemaking does not allow operators to operate without oversight. BSEE continues to serve in an oversight and enforcement capacity, even where regulatory requirements are tied to industry standards. BSEE also disagrees with the commenters' assertion that there is a conflict of interest inherent in using industry standards. Federal law in fact requires that an agency "use standards developed or adopted by voluntary consensus standards bodies rather than government-unique standards, except where inconsistent with applicable law or otherwise impractical." NTTAA; OMB Circular A-119 at p. 13. BSEE follows the requirements of the NTTAA and the relevant guidance in OMB Circular A-119 when incorporating standards into its regulations. Membership in an API standard development committee is not limited to industry representatives[28] and may include non-industry members, such as government personnel, consumer advocates, and academics.

BSEE disagrees with the assertion that the performance-based standards incorporated by reference in this rulemaking are poorly defined and vague and need to be more "clearly established" before they can be adopted in a final rule. Performance-based standards establish expectations for safe operations that allow for more flexibility to determine the appropriate approach to meeting the expectations based on specific operating conditions. This approach is not a design flaw that must be corrected, but rather an important feature of such standards. BSEE's regulations include a mix of prescriptive and performance-based regulatory standards, and both approaches offer a variety of strengths and benefits.

Comments on production safety systems

Summary of comments: A commenter discussed the removal of the requirement for third-party certification for safety and pollution prevention equipment (SPPE). This commenter asserted that both safety and environmental risks would increase by removing the requirement for third-party inspection and certification, especially for extreme conditions. The commenter expressed concern regarding BSEE's proposal to remove the requirement for review and certification of SPPE by an independent third party contained in § 250.802(c)(1), including the requirement of inspection and certification to demonstrate that the SPPE will function under the most extreme conditions to which it may be exposed. The commenter opposed this change, asserting that: these inspections were specifically tailored to address one of the causes of the *Deepwater Horizon* catastrophe; third-party inspections respond to extreme conditions becoming

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28 http://mycommittees.api.org/standards/Reference/API%20Procedures%20for%20Standards%20Development-2016.pdf

more prevalent and intense with climate change; and SPPE implicates a level of risk that meets BSEE's standard for requiring third-party inspection.

- **Response:** This comment is related to another rulemaking – 1014-AA37 Production Safety Systems (AA37). The final rule for that rulemaking was published in the *Federal Register* on September 28, 2018 (83 FR 49216). BSEE received this comment in connection with that rulemaking, as well, and responded to it in the AA37 production safety systems final rule.

V. Section-By-Section Summary and Responses to Comments on the Proposed Rule

This summary discusses every section of 30 CFR part 250 proposed for revision in the proposed rule and this final rule. This summary does not address sections of the existing regulations that are not implicated by the proposed or final rule. Although BSEE did not receive substantive comments on numerous sections covered by the proposed rule, the final rule includes and summarizes those sections. BSEE received substantive comments on many other sections covered by the proposed rule, some of which are included in this final rule without revision and some of which are revised in the final rule. Those sections, as well as the relevant comments on those sections and BSEE's responses, are summarized here.

Subpart A—General

What are the procedures for, and effects of, incorporation of documents by reference in this part? (§ 250.115)

This section in the current regulations is reserved.

<u>Summary of proposed revisions:</u>

BSEE did not propose any specific changes to this section in the proposed rule. However, in the proposed rule discussion of § 250.198, BSEE discussed the potential for technical (non-substantive) revisions to § 250.198 for the purposes of reorganizing and revising that section to make it clearer, more user-friendly, and more consistent with the OFR's recommendations for incorporations by reference in Federal regulations. BSEE consulted with the OFR regarding its suggestions for specific organizational and language changes to § 250.198 and addressed such technical revisions in this final rule. One element of the organizational changes involved moving certain portions of existing § 250.198 out of that regulation, so that it is focused more exclusively on the incorporated materials themselves. BSEE chose to implement this action by relocating the relevant provisions to reserved § 250.115. BSEE determined that those technical revisions will not have a substantive impact on the incorporations by reference of industry standards discussed in this rule or elsewhere.

Summary of final rule revisions:

This final rule adds new § 250.115 in accordance with the recommendations and requirements of the OFR pertaining to regulations that incorporate documents by reference. The language of § 250.115 is based on the introductory language in the existing § 250.198, with certain minor, non-substantive wording changes for clarity. The revised § 250.198, which will serve as a centralized Incorporated by Reference (IBR) section, deletes the introductory language in accordance with OFR's recommendations for these types of IBR provisions. Specifically, the OFR recommends that a centralized IBR section, such as § 250.198, should not include language regarding legal requirements or justifications, scope of the regulations, instructions, or policy. The OFR recommends that the centralized IBR section list documents incorporated by reference and provide information about where the standards are referenced in the regulations and how to obtain a copy of the actual standards. Accordingly, this rulemaking removes the introductory language in existing § 250.198 and relocates the language to the new § 250.115 with minor revisions.

Documents incorporated by reference. (§ 250.198)

This section of the existing regulations includes citations and other information regarding all documents (*e.g.*, industry standards) incorporated by reference in 30 CFR part 250, including where to find references to the incorporated documents in specific sections of the regulations. The requirements for complying with a specific incorporated document can be found where the document is referenced in the regulations, as specified in existing § 250.198. The existing section also discusses BSEE's process for incorporating documents by reference, the regulatory effects of incorporation, and procedures that operators may follow to seek BSEE's approval to comply with alternatives to an incorporated document.

Summary of proposed revisions:

BSEE proposed to:

Revise existing paragraph (h)(63), which incorporates API Standard 53, to add a new cross reference to § 250.734, as revised in the final rule. BSEE also solicited comments on whether to incorporate the 2016 addendum to this standard;

Revise existing paragraph (h)(78), which incorporates API Standard 65—Part 2, Isolating Potential Flow Zones During Well Construction; Second Edition, December 2010, to add a new cross reference to § 250.420(a);

Revise existing paragraph (h)(94) to update the incorporation of API RP 17H to the Second Edition; and

Add a new paragraph (j)(2) for the incorporation by reference of ISO/IEC 17021-1 in order to update the erroneous standard previously incorporated by the 2016 WCR.

As previously mentioned, the proposed rule also discussed potential technical (non-substantive) revisions to § 250.198 that BSEE was considering to address recommendations from the OFR.

Summary of final rule revisions:

As explained in the previous discussion of new § 250.115, BSEE is reorganizing this section consistent with the OFR's recommendations. These revisions include technical, non-substantive changes to the organization of the section to remove discussions of matters other than the incorporated materials themselves and to make the section more user friendly, as well as minor wording and formatting changes for clarity and consistency.

Also, based on comments on the proposed rule, BSEE is revising final paragraph (e)(94) to include the addendum to the already incorporated API Standard 53 Fourth Edition, November 2012.

For the reasons discussed in the section-by-section summary for § 250.427 of this final rule, BSEE is also adding a new paragraph (e)(6), incorporating by reference API Bulletin 92L.

The final rule includes, without change, all other documents proposed for incorporation by reference, including:

API Standard 65—Part 2, Isolating Potential Flow Zones During Well Construction; Second Edition, December 2010;

API Recommended Practice 17H, Remotely Operated Tool and Interfaces on Subsea Production Systems, Second Edition, June 2013, Errata January 2014; and

ISO/IEC 17021-1 - Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part 1: Requirements, First Edition, June 2015.

Summary of Comments:

Comments related to proposed § 250.198 – Incorporation of API Standard 53 Addendum

Summary of comments: Some commenters suggested that BSEE incorporate API Standard 53, 4th Edition, Addendum, which was released in July 2016. These commenters asserted that many of the operations in the Gulf of Mexico already comply with the July 2016 Addendum of API Standard 53 4th Edition. They asserted that the Addendum clarifies the existing text of API Standard 53, including clarifying unintended conflicts with API Specification 16C, *Specification for Choke and Kill Equipment* and that these clarifications would increase operational safety and reliability. They also asserted that the Addendum was compiled, reviewed, and approved by industry representatives, including operators, equipment owners, original equipment manufacturers (OEMs), independent third parties, and service companies. These commenters stated that API is developing a 5th Edition of API Standard 53, but that it was not available at the time of the rulemaking.

- **Response:** BSEE agrees with the commenter's suggestion about incorporating the API Standard 53 addendum into the regulations. BSEE reviewed the Addendum and determined that it would not significantly alter or negatively impact safety. It does, however, address and resolve the same problematic issues for which BSEE currently grants departures, and the IBR of the Addendum will eliminate the need for granting such departures going forward (*e.g.*, section 7.2.3.2.9 Side outlet location and section 7.3.13.2.5 fire rating of MUX lines). Therefore, BSEE determined that the Addendum is appropriate for incorporation into the regulations.

With regard to the comments about API developing API standard 53 5th Edition, BSEE will evaluate that document when it is finalized for possible incorporation into the regulations in a future rulemaking.

Summary of comments: A commenter suggested that arbitrary requirements beyond the provisions in API Standard 53 "reduce safety by adding unnecessary complexity to the blowout prevention equipment systems."

- **Response:** The commenter does not specify which requirements in the regulations the commenter considers to be arbitrary or how such requirements add "unnecessary complexity to the blowout prevention equipment systems." In any event, BSEE disagrees with the commenter's assertion that any requirements in this final rule or existing regulations related to BOP systems are arbitrary or unnecessary. For all the reasons discussed in the 2016 WCR, other prior rulemakings, and in the proposed rule and this final rule, BSEE has determined that any such additional requirements are reasonable and appropriate to ensure that BOP systems are designed and utilized appropriately.

Comments related to proposed § 250.198 – Effectiveness of using industry standards

Summary of comments: A commenter objected to BSEE incorporating by reference any industry standards developed by the oil and gas industry, asserting that standards are "more fluid and not enforceable by law." The commenter asserted that this makes it more difficult for BSEE to be effective, noting that similar problems existed prior to the *Deepwater Horizon* oil spill. The commenter cited the BP Oil Spill Commission report, asserting that it criticized this culture and stated that the Department of the Interior has in turn relied on API in developing its own regulatory safety standards and that API's shortfalls have undermined the entire Federal regulatory system. This commenter was concerned about findings from the BP Oil Spill

Commission report that the API standards represent the "lowest common denominator," and do not reflect "best industry practices."

- **Response:** BSEE disagrees with the commenters' assertions that the documents incorporated by reference are not enforceable and that BSEE relies on API to develop regulations. First, BSEE notes that the cited Report's concerns with incorporation of industry standards were based on agency practices and other circumstances pre-dating the 2010 *Deepwater Horizon* incident. Since that event, many BSEE and industry practices and circumstances have changed significantly. Concerning the comments on BSEE's use of API standards and the assertion that API standards increasingly do not represent best industry practices, BSEE does not agree that incorporation and use of the standards referenced in this final rule is either inappropriate or detrimental to safety and environmental protection. For example, BSEE evaluated the differences between the first and second editions of API RP 17H and determined that the second edition of API RP 17H eliminates the conflict between the first edition and API Standard 53, helps ensure that the appropriate methods are utilized to comply with the API Standard 53 ROV closure timeframes of 45 seconds, and includes provisions on high flow Type D 17H hot stabs. All of the standards referenced in this rulemaking serve as a valuable complement to BSEE's regulations in helping to achieve the bureau's safety and environmental objectives under OCSLA. When incorporated into the regulations, these standards provide a binding baseline that BSEE may supplement with specific requirements where appropriate.

  Moreover, as previously discussed, the NTTAA mandates that Federal agencies use technical standards developed by voluntary consensus standards organizations, instead of government-developed standards, where practicable and consistent with applicable law. There are only a few SDOs, including API, that address issues related to offshore oil and gas operations. Also, API provides standards on technical topics that are not addressed by other SDOs. Additionally, consistent with the NTTAA's preference for agency use of voluntary consensus standards (*see* 15 U.S.C. 272(e)(1)(A)(v)), API develops its standards through a general consensus process, which provides for input from those who are potentially materially impacted by the standard, however, membership on API standards committees is not limited to industry participants. In addition, based on recommendations in other post-*Deepwater Horizon* reports (*see, e.g.,* Final Report on the Investigation of the Macondo Well Blowout, *Deepwater Horizon* Study Group (March 1, 2011) at pp. 94-98), BSEE has expanded its standards program and increased its involvement in the standards development process, including development of many API standards, and is continuously improving and formalizing BSEE's internal process for reviewing standards relevant to the regulatory program. These developments help BSEE identify issues that may not be adequately addressed in incorporated standards and to supplement those standards, as necessary, in its regulations.

BSEE also disagrees with the commenter's assertion that industry developed standards should not be incorporated in its regulations because BSEE does not have the authority to enforce compliance with incorporated documents. BSEE incorporates industry standards by reference in accordance with the requirements of the NTTAA and implementing OMB guidance, OFR regulations (1 CFR part 51), and BSEE's own procedures for incorporation (§ 250.115, *What are the procedures for, and effects of, incorporation of documents by reference in this part?*). The effect of incorporation by reference of an industry standard into the regulations is that the incorporated document becomes a regulatory requirement, *see* existing § 250.198(a)(3) (moved to new final § 250.115(c)), and thus becomes subject to BSEE oversight and enforcement in the same manner as other regulatory requirements. BSEE has repeatedly described this principle in a number of previous rulemakings.

BSEE is not certain what the commenter means by industry standards being "more fluid." However, the commenter may be concerned about industry issuance of revisions to or new editions of incorporated standards. The OFR regulations, at 1 CFR part 51, govern how BSEE and other Federal agencies incorporate documents by reference. Agencies may incorporate a document by reference by publishing in the *Federal Register* the document title, edition, date, author, publisher, identification number, and other specified information. Incorporation by reference of a document is limited to the edition of the document so incorporated. *See* existing § 250.198(a)(1) (moved to new final § 250.115(a)). In short, the operator must comply with the edition of the standard that BSEE incorporates in its regulations. If an SDO later revises a standard that BSEE has previously incorporated in a final rule, BSEE would need to evaluate the revised standard before choosing whether to incorporate it through rulemaking into the regulations; in other words, industry itself cannot change the regulatory requirements by revising a standard after BSEE incorporates the standard in its regulations.

Comments related to proposed § 250.198 – Use of the latest published edition and incorporation of additional documents

Summary of comments: Several commenters recommended that BSEE incorporate the latest published edition of each standard into the regulations. Commenters asserted that BSEE has directly participated in the development of these standards and that recognition of these standards in the regulations would be consistent with the expectations of the NTTAA, which requires BSEE to consult and use technical standards that are developed or adopted by voluntary consensus standards bodies in lieu of BSEE creating its own unique standards.

- **Response:** BSEE generally agrees that it should consider whether to incorporate the latest editions of standards for which prior editions are already incorporated in the regulations. BSEE reviews its regulations in accordance with E.O. 13563—Improving Regulation and Regulatory Review and E.O. 13610—Identifying and Reducing Regulatory Burdens, "to ensure, among other things, that regulations incorporating standards by reference are updated on a timely basis . . . ." (OMB Circular A-119 at p. 4). In fact, BSEE is currently reviewing many of the standards incorporated in the existing regulations and will provide additional information regarding its review when appropriate. If BSEE decides that some updating of incorporated standards (*e.g.,* by referencing new editions of existing standards, or replacing previously incorporated standards with different standards, or simply deleting outdated standards) in the regulations is warranted, it will explain its position through future rulemakings, as appropriate. Of course, BSEE may also decide, for appropriate reasons, to keep a previously incorporated edition of a standard in the regulations even if there is an updated edition. BSEE is not in a position at this time, either substantively or procedurally, to implement the updates suggested by the commenter as part of this final rule.

Summary of comments: Some commenters recommended that BSEE should incorporate into its regulations additional documents and updated editions associated with BOP systems (*e.g.*, ANSI/API Spec. 16A - Specification for Drill-through Equipment, API Standard 16AR -

Standard for Repair and Remanufacture of Drill-through Equipment, and API Spec 20E - Alloy and Carbon Steel Bolting for Use in the Petroleum and Natural Gas Industries).

- **Response:** BSEE acknowledges the importance of those standards to offshore operations. However, they were not proposed for incorporation in the proposed rule and BSEE is not currently in a position -- procedurally or substantively -- to incorporate them into this final rule. BSEE will evaluate these documents for possible future incorporation in the regulations. BSEE continually evaluates new standards and new editions of existing standards for possible incorporation into the regulations. If, after completing evaluations of these standards, BSEE determines they are appropriate to incorporate, we may proceed with a separate rulemaking process to incorporate the documents.

Summary of comments: A commenter recommended that BSEE define international standards as any globally recognized, good-practice standards.

- **Response:** BSEE does not agree that any such definition is necessary in these regulations. BSEE follows the guidance established by OMB Circular A-119. With respect to international standards, OMB Circular A-119 explains that the United States is obligated under the Technical Barriers to Trade (TBT) Agreement to use relevant international standards, except where such standards would be an ineffective or inappropriate means to fulfill the legitimate objective pursued. In particular, according to OMB Circular A-119, the TBT Agreement, Article 2.4, provides that where technical regulations are required and relevant international standards exist or their completion is imminent, World Trade Organization (WTO) Members shall use them, or the relevant parts of them, as a basis for their technical regulation. In addition, 19 U.S.C. § 2532 directs Federal agencies, in developing standards, to base their standards on international standards, if appropriate. OMB Circ. A-119 (p. 22).

Subpart B—Plans and Information

What must the DWOP contain? (§ 250.292)

This section of the existing regulations specifies information (*e.g.*, description of the typical wellbore, structural design for each surface system) that must be included in a DWOP. Paragraph (p) of this section details the information that must be contained within a DWOP relating to free standing hybrid risers (FSHR) and the associated buoy and tether system.

Summary of proposed revisions:

BSEE proposed to revise the FSHR requirements of this section to eliminate duplicative submittals and certifications of FSHR systems.

Summary of final rule revisions:

BSEE received no substantive comments on these provisions of the proposed rule and includes the proposed language in the final rule without change.

Subpart D—Oil and Gas Drilling Operations

What must my description of well drilling design criteria address? (§ 250.413)

This section of the existing regulations specifies the type of information that must be provided in the well drilling description portion of an APD.

Summary of proposed revisions:

BSEE proposed to add to paragraph (g) a parenthetical clarification of “surface and downhole” after “proposed drilling fluid weights,” to ensure the operator includes the weight of the drilling fluid in both places. BSEE proposed this clarification to help ensure the drilling fluid weight is fully evaluated and appropriate for the estimated bottom hole pressures.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section, and is including the proposed language in the final rule without change.

What must my drilling prognosis include? (§ 250.414)

This section of the existing regulations describes the information that must be included in the drilling prognosis portion of an APD.

Summary of proposed revisions:

BSEE proposed to revise paragraph (c)(3) of this section to add the words “and analogous” before “well behavior observations” and “, if available” at the end of the paragraph. BSEE proposed this minor wording change to ensure that operators use available data from wells with similar conditions to those of the well being drilled when determining the pore pressure and fracture gradient to ensure accuracy and safety when establishing the drilling margin. In the proposed rule, BSEE solicited comments on many of the safe drilling margin provisions, including potential alternatives to the current default 0.5 ppg drilling margin and the possibility of replacing it with a more performance-based standard.

Summary of final rule revisions:

The 0.5 ppg drilling margin requirements in this section remain unchanged. As in the existing regulations, the final rule requires the use of a default 0.5 ppg drilling margin while continuing to allow for a deviation from the default under certain circumstances. The request to deviate does not have to be submitted as an alternate procedure or departure request. However, as the proposed rule indicated, BSEE considered whether to allow a different method or "avenue" for operators to submit a justification for a different drilling margin (83 FR 22133). Based on comments received, BSEE is revising § 250.414(c)(2) to allow operators the option to submit the required justification for BSEE approval at an earlier date prior to the APD. Any such approval will be contingent upon confirmation in the APD that the plans and information underlying the BSEE approved justifications have not changed. An operator may submit such requests prior to an APD, or continue to provide that information within the APD. Regardless of the timing of the request to use an alternative drilling margin, each request will require the supporting justifications as provided in existing regulations. BSEE is currently approving some APDs with drilling margins other than 0.5 ppg based on specific well conditions.

<u>Summary of Comments:</u>

Comments related to proposed § 250.414 – Opposition to any proposed revisions to the 0.5 ppg safe drilling margin

Summary of comments: Multiple commenters expressed significant concerns about potential revisions to the 0.5 ppg safe drilling margin requirements and emphasized the importance of a safe drilling margin. Many commenters also asserted that the 0.5 ppg margin was added to the existing regulations based on the technical work and recommendations from the National Academy of Engineering and the National Research Council arising out of *Deepwater Horizon* investigations and that any proposed changes to or removal of the safe drilling margin requirements lack technical evidence or justification. Commenters asserted that BSEE must have clear, defined, and enforceable criteria to determine whether the proposed drilling margin will be safe and cannot simply accept an operator's conclusory statements that its proposal is safe.

- **Response**: BSEE agrees with the commenters' concerns about making revisions to the 0.5 ppg drilling margin requirements at this time. BSEE is keeping the 0.5 ppg drilling margin as a presumptive minimum requirement as a default standard in the regulations. As more drilling margin data and research becomes available, BSEE may reevaluate the drilling margin for possible revisions in future rulemakings.

Comments related to proposed § 250.414 – Use of a performance-based drilling margin

Summary of comments: Multiple commenters expressed support for revising or removing the 0.5 ppg safe drilling margin default standard requirement. Some commenters recommended replacing the current requirements with a performance-based standard established on a case-by-case basis, based on data and analysis specific to a particular well. Those commenters asserted that this would be a safer and better alternative for establishing safe drilling margins. They asserted that such an alternative would provide a risk-based approach that ensures safety and provides investment certainty to the industry. Some commenters also suggested that industry would welcome the opportunity to propose an engineered, performance-based standard for the establishment of appropriate safe drilling margins through the well permitting process. Some commenters asserted that technology has improved to justify a performance-based drilling margin, specifically citing hydraulic modeling techniques, managed pressure drilling, and use of real-time downhole pressure while drilling (PWD).

- **Response:** BSEE does not accept the commenters' recommendations to replace the 0.5 ppg drilling margin with a performance-based option. BSEE notes, however, that existing regulations provide opportunities for similar case-by-case analyses based on specific well conditions. The regulations establish default minimum requirements; however, they also allow for deviation from the default 0.5 ppg drilling margin with sufficient justification, based on demonstrated well conditions and operational plans. It is the operator's responsibility to provide sufficient data and justification to use a lower drilling margin. BSEE is retaining the 0.5 ppg drilling margin as a presumptive minimum requirement as a default standard in the regulations. As more drilling margin data and research becomes available, BSEE may reevaluate the drilling margin for possible revisions in future rulemakings.

BSEE agrees that technology is improving and could help justify a performance-based drilling margin at some point. However, BSEE would need to obtain and evaluate more research and data before it can develop and adopt a performance-based drilling margin. In the meantime, an operator may use the improved technologies cited by the commenters to substantiate an alternative drilling margin specified in an APD, provided it complies with the requirement in existing § 250.414(c)(2) regarding adequate documentation to justify the alternative margin.

Comments related to proposed § 250.414 – Drilling margin below 0.5 ppg

Summary of comments: Some commenters asserted that evaluation and analysis of industry data on wells drilled demonstrates that operators have safely planned and drilled sections of wells below the current default 0.5 ppg drilling margin and that the current 0.5 ppg margin is arbitrary and does not ensure safety.

- **Response:** BSEE agrees with the commenters that operators have successfully drilled some wells below the default 0.5 ppg drilling margin under the current regulations. As noted in the proposed rule, between promulgation of that default margin in the 2016 WCR and publication of the proposed rule, BSEE approved the drilling of 32 wells with drilling margins below the 0.5 ppg default. Operators may continue to utilize drilling margins below 0.5 ppg provided that they apply for such a margin in their APDs and comply with the requirements in § 250.414(c)(2) by providing adequate documentation to justify the alternative drilling margin. However, BSEE disagrees with the commenters' assertion that the 0.5 ppg margin is arbitrary and does not ensure safety. A 0.5 ppg is an appropriate safe drilling margin for normal drilling scenarios, and, prior to the promulgation of the 2016 WCR, BSEE approved (and thus made a requirement) this margin in numerous APDs. BSEE understands that there are some well-specific circumstances that may justify an acceptable lower drilling margin to drill a well safely and BSEE has approved appropriate alternative downhole mud weights as part of a safe drilling margin in many APDs. However, BSEE is choosing not to alter the 0.5 ppg default drilling margin in this final rule.

Summary of comments: A commenter recommended adding the Conceptual Deepwater Operations Plan (CDWOP or DWOP) into the regulatory text with the objective of obtaining field-wide approvals when it is anticipated that a lower drilling margin may be needed on numerous wells. The commenter asserted that this would be important for sanctioning major capital projects, since regulatory certainty is critical when making multi-billion dollar investment decisions. In particular, the commenter asserted that industry needs clarity on the requirements for permit approval and reasonable certainty that BSEE will approve an engineered drilling margin before incurring major costs that would be wasted if approval were denied.

- **Response:** BSEE declines to accept the commenter's suggestion. The DWOP or CDWOP is a field overview and not well-specific. The operator submits a DWOP for each development project in which it will use non-conventional production or completion technology, however that submission does not include the full scope of relevant information required in the APD. BSEE does not believe that the relevant determinations can be reached at a field level through the DWOP process, as opposed to the well-specific level. However, BSEE recognizes that the timing of drilling margin approval may affect sanctioning of major capital projects, and BSEE is revising § 250.414(c)(2) to allow operators the option to submit the required justification for a proposed alternative safe drilling margin for BSEE approval at an earlier date prior to the APD. Any such approval will be contingent upon confirmation in the APD that the plans and information underlying the BSEE approved justifications have not changed. BSEE is not revising the requirements to use a default 0.5 ppg drilling margin or the standards for obtaining approval of a deviation from the default under certain circumstances. As such, this change will have no impact on safety or environmental protection. The revision to § 250.414(c)(2) will simply provide operators with the option to request BSEE approval for alternative safe drilling margins on a well-by-well basis at any time that the necessary information is available. BSEE drilling engineers review drilling margins and the APD with intimate knowledge of the particular field and are the subject matter experts on drilling in their respective BSEE regions.

What well casing and cementing requirements must I meet? (§ 250.420)

This section of the existing regulations imposes specific requirements for casing and cementing of all wells.

Summary of proposed revisions:

BSEE proposed to incorporate by reference API Standard 65 – Part 2 in paragraph (a)(6) of this section for purposes of specifying the standards to ensure centralization of the pipe during cementing. BSEE determined that the standards set forth in API Standard 65 – Part 2 would provide clearer guidelines for operators than the existing regulatory language.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

What are the casing and cementing requirements by type of casing string? (§ 250.421)

This section of the existing regulations specifies casing and cementing requirements applicable to certain types of casing strings (*e.g.*, drive or structural strings, conductor strings).

Summary of proposed revisions:

BSEE proposed to make minor revisions in paragraphs (c), (d), (e), and (f) to clarify that all identified length requirements are to be taken from measured depth. This clarification of the existing regulatory requirements would provide consistency for planning and permitting purposes. Also, in paragraph (f), BSEE proposed removing the specifics of the listed example regarding when a liner may be used as intermediate casing. The proposed rule stated that the example is redundant because it restates the same information already contained in this section.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section, and is including the proposed language in the final rule without change.

What are the requirements for casing and liner installation? (§ 250.423)

This section of the existing regulations establishes requirements for proper installation of casing in the subsea wellhead or liner in the liner hanger, including requirements for latching or lock down mechanisms and pressure testing on the seal assembly.

Summary of proposed revisions:

BSEE proposed to revise paragraphs (a) and (b) by removing the words “and cementing” after “upon successfully installing.” The proposed rule explained that revisions to this section are necessary because there are many situations in the design of the casing or liner string running tool where the latching or lock down mechanism is automatically engaged upon installing the string. BSEE proposed these revisions to allow more flexibility on an operational, case-by-case basis for determining the appropriate time to engage these mechanisms and thus reduce the number of alternate procedure requests submitted to BSEE for approval under § 250.141.

<u>Summary of final rule revisions:</u>

BSEE received and considered comments on the proposed revisions and includes the proposed revisions in the final rule. Additionally, as suggested by some commenters, BSEE is revising paragraphs (a) and (b) by removing from each the following language: “If there is an indication of an inadequate cement job, you must comply with § 250.428(c).” These statements are unnecessary because § 250.428(c) is applicable for any cementing operation and does not need to be specifically cross referenced in this section. Removing this cross reference does not change any requirements for how operators must respond to indications of an inadequate cement job; if there are any indications of an inadequate cement job, the operator must evaluate the cement job as required in § 250.428.

<u>Summary of Comments:</u>

Summary of comments: Many commenters agreed with the proposed changes, and also asserted that references to section § 250.428 in this section were redundant and should be removed from this section.

- **Response:** BSEE agrees with the commenters that referencing § 250.428 is not necessary in this section, and has revised the final regulatory text accordingly. This language is unnecessary because § 250.428(c) is applicable for any cementing operation and thus does not need to be specifically cross-referenced in paragraphs (a) and (b). Removing this cross-reference does not change any requirements for how operators must respond to indications of an inadequate cement job; if there are any indications of an inadequate cement job, the operator must evaluate the cement job as required in § 250.428.

Summary of comments: A commenter expressed concerns that the proposed revisions to this section would compromise safety and asserted that BSEE failed to explain why its prior rationale for the language of § 250.423 contained in the 2016 WCR was inaccurate or no longer applies. The commenter recommended retaining the current regulatory requirements.

- **Response:** BSEE disagrees that this revision compromises safety or is inaccurate and inconsistent with prior rationale. After further BSEE review since the 2016 WCR, and as discussed in the proposed rule, some of these latching or locking mechanisms are designed to automatically engage upon installation of the associated string. The revisions made by this final rule continue to ensure the lock down mechanisms are properly securing the appropriate liner or casing in place to ensure wellbore integrity while eliminating inconsistency between the existing regulatory text and certain common designs of the relevant mechanisms.

What are the requirements for pressure integrity tests? (§ 250.427)

This section in the current regulations specifies the requirements for conducting pressure integrity testing. This section also requires the operator to revise its drilling program based upon pressure integrity testing and hole behavior observations and requires the operator to maintain the safe drilling margin while drilling.

Summary of proposed revisions:

BSEE did not propose any revisions to this section. BSEE did, however, solicit comments regarding potential alternative approaches to administering the safe drilling margin requirements, including specifically “whether there are situations where drilling can continue prior to receiving alternative safe drilling margin approval from BSEE,” such as “where, despite not being able to maintain the approved safe drilling margin, an operator’s continued drilling with an alternative drilling margin creates little risk” and “what level of follow-up reporting ... would be appropriate.”

Summary of final rule revisions:

Based upon comments received, BSEE is revising paragraph (b) to require notification to the BSEE District Manager in the event the required safe drilling margin cannot be maintained, and to incorporate API Bulletin 92L as a standard for further action, where appropriate. In conjunction with the incorporation of API Bulletin 92L, BSEE is requiring submittal of a revised permit documenting any responsive actions taken to remedy lost circulation. BSEE is also clarifying that the District Manager must review and approve any proposed remedial actions where the operator suspends drilling operations in response to an inability to maintain the drilling margin.

Summary of Comments:

Comments related to proposed § 250.427 – Incorporation of API Bulletin 92L

Summary of comments: Many commenters requested that BSEE incorporate API Bulletin 92L, in accordance with NTTAA requirements, for managing certain well conditions such as mud losses. The commenters asserted that this document was developed by API with BSEE participation to provide detailed operational direction in the event of lost circulation while drilling in the Gulf of Mexico. The commenters asserted that it is appropriate for operators to specify, in the well's DWOP or APD, how they will remedy an anticipated loss of circulation on bottom. They also asserted that, if an operator experiences an unanticipated loss of circulation or a reduced drilling margin, the operator should provide notice and the operator's plan for remedying the issue to BSEE within a reasonable timeframe.

- **Response**: For the reasons explained in part III.B.1 of this notice, BSEE agrees with the commenters' recommendations to incorporate API Bulletin 92L. BSEE is revising § 250.427(b) to allow operators to take action in accordance with API Bulletin 92L, and provide notification to the BSEE District Manager documenting the operator's use of API Bulletin 92L, when the operator cannot maintain its approved drilling margin. In conjunction with the use of API Bulletin 92L, BSEE is requiring submittal of a revised permit documenting any remedial actions. BSEE has evaluated API Bulletin 92L and determined that reliance on that standard when responding to drilling margin issues would not reduce safety. BSEE also determined that this document is consistent with BSEE policy in the approaches used to address these issues, appropriate for meeting the agency's regulatory needs, and preferable to an agency-developed standard. API Bulletin 92L includes flow charts that can be used as an aid to safely drill ahead when lost circulation occurs and the required criteria and procedures are met.

What must I do in certain cementing and casing situations? (§ 250.428)

This section of the existing regulations describes actions that must be taken when certain situations (*e.g.*, unexpected formation pressures) are encountered during casing or cementing operations.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraph (c) to include the term “unplanned” when describing the lost returns that provide indications of an inadequate cement job. BSEE proposed this revision to minimize the number of unnecessary revised permits submitted to BSEE for approval. Current cementing practices utilize improved well modelling to identify and account for zones that may have anticipated losses that are not indicative of an inadequate cement job.

BSEE proposed to redesignate existing paragraph (c)(iii) as new paragraph (c)(iv) and to add new paragraph (c)(iii) to allow the use of tracers in the cement, and the logging of the tracers’ location prior to drill out, as an alternative approach for locating the top of cement. BSEE proposed this addition to provide more viable options and more flexibility for locating top of cement, without compromising safety, in order to help minimize rig down time from running in and out of the hole multiple times.

In addition, BSEE proposed a revision to paragraph (d) to clarify that, if there is an inadequate cement job, operators are required to comply with § 250.428(c)(1). This revision would help assess the overall cement job to allow for improved planning of remedial actions.

BSEE also proposed to revise paragraph (d) to allow BSEE to pre-approve remedial cementing actions through a contingency plan within the original approved permit. BSEE proposed to allow operators to include the remedial actions as contingency plans in the original APD, for BSEE to consider for pre-approval, in order to minimize the time necessary for operators to commence approved remedial cementing actions, and to reduce burdens on operators and BSEE resulting from multiple submissions of revised permits. However, the rule clarifies that, if BSEE has not already approved the remedial actions, the operator must submit the remedial actions in a revised permit application for BSEE review and approval.

Summary of final rule revisions:

BSEE received and considered comments on these provisions of the proposed rule and includes the proposed language in the final rule without change.

Summary of Comments:

Comments related to proposed § 250.428(d) – Use of a professional engineer (PE)

Summary of comments: A commenter opposed the proposal to allow pre-approval of remedial cementing actions in lieu of requiring a PE approval at the time, asserting that pre-approval would be hypothetical since the problem to be remedied would not be known at the time of approval.

- **Response:** BSEE disagrees with the commenter. PE certification of the remedial actions may be included in the original permit, if the operator is able to anticipate where losses may occur (e.g., depleted zones, known geology). The PE may review the proposed remedial actions in the original permit to ensure integrity and consistency with BSEE's regulations. If the operator chooses to include contingency planning in the original permit application, those contingencies would be reviewed and certified by the PE. If the operator encounters circumstances that the approved permits do not address (including PE certification), it would be required to submit a revised permit for BSEE approval that would include the PE certification. Accordingly, the commenter's concern that the problem would not be known at the time of approval is addressed by the fact that any approval will reach only those issues foreseen and considered at the time of approval; if the issue that arises was not considered and approved for remedial action, the operator must obtain separate approval to remedy the actual issue presented.

Comments related to proposed § 250.428 – Unplanned versus unanticipated lost returns

Summary of comments: A commenter suggested that the proposed wording change should be "unanticipated lost returns" instead of "unplanned lost returns."

- **Response:** BSEE disagrees with commenter. This change is not necessary because certain lost returns can be planned for within a BSEE-approved permit, and the information can be identified, included, and approved within the permit. Further, there can be lost returns that an operator may not "anticipate" occurring, but which the operator nevertheless may be able to plan for in advance, should they occur. The key is whether the operator has an acceptable plan in place for addressing the lost returns, regardless of whether it anticipates them occurring or not. If an operator encounters circumstances that are not described in an approved permit, such as unplanned lost returns, then a new BSEE approval would be required at that time.

Comments related to proposed § 250.428(c)(1) – Use of a casing shoe test

Summary of comments: Some commenters suggested that BSEE add the use of a casing shoe test to locate the top of cement.

- **Response:** BSEE disagrees with commenter. A casing shoe test by itself does not confirm cement integrity behind the casing/liner or verify the top of cement (TOC).

Comments related to proposed § 250.428(c)(1)(iii) – Use of tracers

Summary of comments: Some commenters expressed concerns about the proposed language to require logging of the tracers prior to drill out. The commenters recommended removal of "prior to drill out." The commenters asserted that tracers are meant to be used when the losses are more likely, and that operators should be able to find the TOC through the use of bottom hole assembly (BHA) measurement while drilling (MWD).

- **Response:** BSEE does not accept the commenters' suggested removal of "prior to drill out." The addition of tracers to this section allows operators another option for determining if the cement job is adequate. The commenters incorrectly assumed that BSEE is requiring an additional logging run to confirm the location of the tracers; however, BSEE expects that operators will still be able to locate the TOC by logging tracers with the BHA.

Comments related to proposed § 250.428(c) – Evaluation logs

Summary of comments: A commenter suggested that BSEE require a cement evaluation log in complex, higher risk wells and for wells in environmentally sensitive locations. The commenter asserted that temperature and tracer logs will indicate the cement top, but will not provide information on cement quality throughout the entire cement column. The commenter also asserted that a cement evaluation log provides substantially more information on cement placement and quality. The commenter also suggested that if remedial cementing is needed, a cement evaluation log should be run to verify the repair.

- **Response:** BSEE agrees with the commenter that a cement evaluation log helps determine cement placement and the overall quality of the cement job. However, BSEE disagrees with the commenter's suggestion that a cement evaluation log is necessary for the specified wells even when there is not an indication of an inadequate cement job. BSEE requires other tests to help confirm well and cement integrity (*e.g.*, pressure integrity testing required in existing § 250.427). The purpose of paragraph (c) is to help determine whether remedial actions are necessary when there is an indication of an inadequate cement job, and BSEE's regulations offer the option to run cement evaluation logs to determine the TOC. Furthermore, BSEE also has the discretion to require additional logs if warranted on a case-by-case basis.

Comments related to proposed § 250.428(d) – Use of flow charts

Summary of comments: A commenter recommended the addition of language to allow the use of approved operator flow charts to determine the extent and timeliness of the remedial actions in lieu of BSEE-approved permits.

- **Response:** BSEE declines to expressly include a reference in the regulations that would allow the use of operator flow charts for remedial actions in lieu of a BSEE-approved permit. If a cement job is deemed inadequate according to the criteria specified in the existing regulations, then the operator must take remedial actions. BSEE does not limit the information that is submitted within a permit application for BSEE review and approval. An operator may submit flow charts in the permit application outlining the proposed remedial actions, if it so chooses. BSEE may consider approval of such flow charts as part of the operator’s remedial actions. But flow charts will not replace permits in the approval process.

What are the diverter actuation and testing requirements? (§ 250.433)

This section of the existing regulations describes the requirements for diverter actuation, pressure testing, and vent line flow testing.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise existing paragraph (b) to modify requirements for subsequent diverter testing after the initial test, by allowing partial activation of the diverter element and by not requiring a flow test. BSEE proposed these changes to codify longstanding BSEE policy, minimize the number of alternate procedure requests submitted to BSEE, and help minimize the possibility of accidental discharge of mud overboard during full flow testing.

<u>Summary of final rule revisions:</u>

BSEE received and considered multiple comments regarding this proposed provision, including a number in general support, and includes the proposed language in the final rule without change.

Summary of Comments:

Comments related to proposed § 250.433 – Opposition to proposed changes

Summary of comments: A commenter opposed the proposed changes asserting that the proposed rule did not adequately define the proposed reduced diverter system testing or demonstrate that the new test regimen would provide a level of safety equivalent to the existing test requirements.

- **Response**: BSEE disagrees with the commenter. The final rule requirements will improve the existing regulation and will ensure safety at least equivalent to the existing requirements. The revisions will minimize the risk of hydrocarbons or mud inadvertently being discharged overboard during subsequent testing while ensuring functionality and integrity of the components by requiring the partial activation. Furthermore, BSEE still requires actuation of the diverter sealing element, diverter valves, and diverter control systems upon installation, and a flow test of the vent lines as required in existing § 250.433.

What are the requirements for directional and inclination surveys? (§ 250.461)

This section of the existing regulations specifies operational requirements for conducting surveys in vertical and directional wells.

Summary of proposed revisions:

BSEE proposed to revise paragraph (b) by extending the maximum permitted survey intervals during angle-changing portions of directional wells from 100 feet to 180 feet. This would account for the majority of the pipe stand lengths in use and would address technological developments that BSEE has accommodated through approvals of alternative procedures under § 250.141 since before the 2016 WCR.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section, and is including the proposed language in the final rule without change.

What are the source control, containment, and collocated equipment requirements? (§ 250.462)

This section of the existing regulations outlines the requirements for BSEE approval of the operator's source control and containment capabilities, including a determination of the source control and containment equipment capabilities, assurance of access to the equipment, and ability to deploy Source Control and Containment Equipment (SCCE). This section also includes maintenance, inspection, and testing requirements for specified containment equipment.

Summary of proposed revisions:

In paragraph (b) of this section, BSEE proposed to clarify that the SCCE to which operators need to have access is based on the determinations regarding source control and containment capabilities required in § 250.462(a). BSEE also proposed to clarify that the identified list of equipment represents examples of the types of SCCE that may be determined appropriate in specific circumstances rather than equipment that is universally required.

BSEE proposed revisions to paragraph (e)(1)(ii) to replace the phrase "a BSEE approved verification organization" with the phrase "an independent third party."

BSEE also proposed revisions to paragraph (e)(3) to clarify that subsea utility equipment utilized solely for containment operations must be available for inspection at all times. BSEE proposed revising paragraph (e)(4) to clarify that it is applicable only to collocated equipment identified in the Regional Containment Demonstration (RCD) or Well Containment Plan and not to all collocated equipment. BSEE proposed revisions to both paragraphs (e)(3) and (e)(4) to help ensure that the equipment described in those paragraphs is available for BSEE inspection.

Summary of final rule revisions:

BSEE received and considered multiple comments in support of and in opposition to the proposed changes. BSEE is including the proposed language in the final rule. BSEE is also including in this final rule an administrative revision to paragraph (e)(2)(i) to reflect the correct cross-reference to the Subpart H regulations. This change is technical, non-substantive, and necessary due to the updated citations from another recently published BSEE rulemaking, Final Rule: Oil and Gas and Sulphur Operations on the Outer Continental Shelf—Oil and Gas Production Safety Systems (83 FR 49216 , September 28, 2018) which updated the production safety systems requirements of Subpart H.

Summary of Comments:

Comments related to proposed § 250.462 – SCCE availability

Summary of comments: Some commenters opposed the proposed revisions to this section, asserting that the proposed changes would weaken the requirements to have SCCE available, and could significantly increase the time involved to control a major oil spill.

- **Response:** BSEE disagrees with these comments. The dedicated equipment at issue is used solely for containment and must be available for inspection by BSEE at all times, and the location of this collocated equipment will be provided to BSEE. The equipment required for the specific well location is determined based on the operator's RCD or Well Containment Plan (WCP). As discussed in the proposed rule, the majority of SCCE, such as capping stacks and top hats, has no other commercial purpose and is used solely for containment operations. This unique containment equipment is maintained and readily available for inspection by BSEE at any time and would be available for immediate use if a well control event occurs. Other equipment listed for source control that has broader commercial purposes, such as ROVs and vessels, are also required to be readily available. The clarifying revisions to these regulatory provisions do not weaken these key safety elements.

Subpart E—Oil and Gas Well-Completion Operations

Tubing and wellhead equipment. (§ 250.518)

This section of the existing regulations outlines the completion operational requirements for tubing, wellhead equipment, subsurface safety equipment, and packers and bridge plugs.

Summary of proposed revisions:

BSEE proposed revisions to paragraph (e)(1) to clarify that only permanently installed packers or bridge plugs, which are qualified as mechanical barriers, are required to comply with ANSI/API Spec. 11D1. BSEE proposed these changes to ensure that the packers and bridge plugs utilized as required mechanical barriers are ANSI/API Spec. 11D1 compliant, while eliminating the requirement that packers and plugs used for other, non-critical, purposes meet the standard.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and, based on that review, BSEE is revising paragraph (e)(1) in this final rule to further clarify that the "uppermost" permanently installed packer and "all permanently installed" bridge plugs, which qualify as a mechanical barrier, must comply with ANSI/API Spec. 11D1. These revisions provide further clarity about what packers and bridge plugs are covered by this section and codify BSEE policy that has been in place since the implementation of the 2016 WCR. Also based on BSEE's consideration of comments received on the proposed rule, BSEE is adding in the final rule a new paragraph (g) to require operators to "have two independent barriers, one being mechanical, in the exposed center wellbore prior to removing the tree and/or well control equipment…."

<u>Summary of Comments:</u>

Comments related to proposed § 250.518 – Barrier clarification

Summary of comments: Multiple commenters supported the proposed clarification of this section. However, one commenter expressed concerns that there would be confusion about the use of mechanical barriers designed for other operations during well completion or workovers. The commenter asserted that identification of the proper barriers should be stated in the well control plan to eliminate any potential confusion.

- **Response:** BSEE agrees with the commenters who expressed general support for the proposed revisions. BSEE also agrees to some extent with one commenter's concerns about potential confusion regarding the mechanical barriers language in the proposed changes to § 250.518, *Tubing and Wellhead Equipment*. The required mechanical barriers are specific to the associated operation (workover, completion, or decommissioning) and the regulatory text should be clear and consistent with similar requirements. Based on the consideration of this comment, BSEE revised the language in final § 250.518 to be consistent with the language in final § 250.619, pertaining to workover operations.   During comment review, BSEE determined that it should add a new final paragraph (g) that mimics the language proposed for § 250.619, *Tubing and wellhead equipment*, to address the circumstance of well control equipment being unlatched during initial completion operations. This language is consistent with how BSEE has implemented this regulation, and BSEE is making this addition to further clarify the intent to have two barriers in place prior to removing the tree or well control equipment. This addition reflects current BSEE requirements and operational practice. However, BSEE disagrees with the commenter's suggestion that the barriers should be identified in the well control plan, as these mechanical barriers are identified within the well schematics submitted in BSEE permit applications.

What are the requirements for casing pressure management? (§ 250.519)

This section of the existing regulations requires casing pressure management and adherence to specified industry standards and the requirements of this subpart.

<u>Summary of proposed revisions:</u>

BSEE proposed minimal revisions to this section in order to update incorrect citations. These revisions are administrative in nature and ensure that the appropriate citations are correctly cross referenced.

<u>Summary of final rule revisions:</u>

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

How do I manage the thermal effects caused by initial production on a newly completed or recompleted well? (§ 250.522)

This section of the existing regulations specifies operational requirements regarding thermal casing pressure during initial startup.

<u>Summary of proposed revisions:</u>

BSEE proposed minimal revisions to this section to update incorrect citations. These revisions are administrative in nature and ensure that the appropriate citations are correctly cross referenced.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

When am I required to take action from my casing diagnostic test? (§ 250.525)

This section of the existing regulations specifies certain operational conditions that, when identified in the casing diagnostic tests, would require an operator to take actions.

Summary of proposed revisions:

BSEE proposed minimal revisions to paragraph (d) of this section to update incorrect citations. These revisions are administrative in nature and ensure that the appropriate citations are correctly cross referenced.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

What do I submit if my casing diagnostic test requires action? (§ 250.526)

This section of the existing regulations specifies the required submittals in the event of a casing diagnostic test that requires action.

Summary of proposed revisions:

BSEE proposed minimal revisions to this section to update incorrect citations. These revisions are administrative in nature and ensure that the appropriate citations are correctly cross referenced.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

What if my casing pressure request is denied? (§ 250.530)

This section of the existing regulations outlines the steps an operator must take when BSEE denies its casing pressure request.

Summary of proposed revisions:

BSEE proposed minimal revisions to paragraph (b) of this section to update incorrect citations. These revisions are administrative in nature and ensure that the appropriate citations are correctly cross referenced.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

Subpart F—Oil and Gas Well-Workover Operations

Definitions. (§ 250.601)

This section in the existing regulations lists the definitions specific to workover operations.

Summary of proposed revisions:

BSEE revises the definition of "routine operations" in this section to make it consistent with the definition of routine operations in § 250.105 by adding paragraph (m) "Acid treatments." The 2016 WCR did not address this provision, however based on BSEE experience, this revision is necessary to help minimize confusion about the definition of routine operations.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

Coiled tubing and snubbing operations. (§ 250.616)

This section of the existing regulations specifies the minimum requirements for coiled tubing and snubbing equipment as well as operational requirements for conducting workover operations with the production tree in place.

<u>Summary of proposed revisions:</u>

BSEE proposed to remove and reserve this section, and to move the content of this section to proposed § 250.750, with minor revisions discussed in connection with that provision. BSEE proposed these revisions to help eliminate inconsistencies between similar requirements throughout different subparts of BSEE's regulations (in 30 CFR part 250) by consolidating those requirements in Subpart G, which is applicable to drilling, completions, workovers, and decommissioning operations.

<u>Summary of final rule revisions:</u>

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed removal and reservation in the final rule without change.

Tubing and wellhead equipment. (§ 250.619)

This section of the existing regulations outlines the workover operational requirements for tubing, wellhead equipment, subsurface safety equipment, and packers and bridge plugs.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraph (e)(1) by clarifying that only permanently installed packers and bridge plugs that are qualified as mechanical barriers are required to comply with ANSI/API Spec. 11D1. This revision would codify BSEE's policy developed since promulgation of the 2016 WCR, to ensure that the required mechanical barriers in a well are held to a higher standard than other common packers or bridge plugs used for various well-specific conditions and completions design. Furthermore, BSEE is aware that certain packers and bridge plugs cannot meet the specifications of ANSI/API Spec. 11D1.

BSEE also proposed to require operators to have two independent barriers, including one mechanical barrier, in the exposed center wellbore prior to removing the tree or well control equipment. This addition would codify existing BSEE policy and make the workover requirements in Subpart F regarding mechanical barriers similar to those already found in existing § 250.720(a).

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and, based on that review, BSEE is revising paragraph (e)(1) in this final rule to further clarify that both the "uppermost" permanently installed packer and "all permanently installed" bridge plugs that qualify as a mechanical barrier must comply with ANSI/API Spec. 11D1. These revisions provide further clarity about what packers and bridge plugs are covered by this section and codify BSEE policy that has been in place since the implementation of the 2016 WCR. BSEE is also moving the phrase "You must have two independent barriers, one being mechanical, in the exposed center wellbore prior to removing the tree and/or well control equipment" from proposed paragraph (e)(1) to new final paragraph (g). This administrative change will help clarify the requirements in paragraph (e)(1) and confirm that paragraph (g) is a stand-alone requirement.

Summary of Comments:

Comments related to proposed § 250. 619 – Barrier clarification

Summary of comments: Multiple commenters supported the proposed clarification of this section for the reasons explained in the proposed rule. However, one commenter expressed concerns that there would be confusion about the use of mechanical barriers designed for other operations during well completion or workovers. The commenter asserted that identification of the proper barriers should be included in the well control plan to eliminate any potential confusion.

- **Response:** BSEE agrees with the commenters' expression of general support for the proposed revisions. BSEE also agrees to some extent with one commenter's concerns about potential confusion regarding the mechanical barriers language in the proposed changes to § 250.518. The required mechanical barriers are specific to the associated operation (workover, completion, or decommissioning) and the regulatory text should be clear and consistent with similar requirements. Based on the consideration of this comment BSEE revised the language in final § 250.518 to be consistent with the language in proposed and final § 250.619, and modified the proposed organization of § 250.619 for clarity and consistency. This language is consistent with how BSEE has implemented this regulation, and BSEE is making this addition to further clarify the intent to have two barriers in place prior to removing the tree or well control equipment. This addition reflects current BSEE requirements and operational practice. However, BSEE disagrees with the commenter's suggestion that the barriers should be identified in the well control plan as these mechanical barriers are identified within the well schematics submitted in BSEE permit applications.

Subpart G—Well Operations and Equipment

What rig unit movements must I report? (§ 250.712)

This section of the existing regulations specifies the requirements for reporting to BSEE of rig unit movement on and off location, and specifies the required content of the reporting.

Summary of proposed revisions:

BSEE proposed to revise this section by adding new paragraphs (g) and (h). BSEE proposed to add paragraph (g) to clarify that reporting is not necessary for rig movements to and from the safe zone during permitted operations. BSEE proposed to add paragraph (h) to clarify that, if a rig unit is already on a well, BSEE would not require a notification for any additional rig unit movements on that well.

Summary of final rule revisions:

BSEE received a comment in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

When and how must I secure a well? (§ 250.720)

This section of the existing regulations outlines the requirements for securing a well whenever operations are interrupted (*e.g.*, evacuation of the rig crew, inability to keep the rig on location, and repair to major rig or well-control equipment).

Summary of proposed revisions:

BSEE proposed to revise paragraph (a)(1) to add an impending National Weather Service-named tropical storm or hurricane to the list of example events that would interrupt operations and require notification. Furthermore, BSEE also proposed to add new paragraph (a)(3) to include provisions for testing the applicable BOP or LMRP upon relatch according to § 250.734 paragraphs (b)(2) or (b)(3), respectively, and obtaining BSEE approval before resuming operations. BSEE proposed these revisions to codify the BSEE storm policy reflected in longstanding guidance and to provide clarity for testing requirements when an operator has returned to the well location and relatched the BOP or LMRP. BSEE also proposed to add new paragraph (d) requiring equipment and capabilities for well intervention and specifying that equipment used solely for well intervention must be readily available for use, maintained in accordance with applicable OEM recommendations, and available for inspection by BSEE upon request. BSEE proposed this addition to ensure that when intervention is necessary on a well, the applicable tools (such as the tree interface tools) are available and ready for their intended use.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and includes the proposed language in the final rule. Furthermore, based on comments received, BSEE is also adding language to paragraph (a)(3)(iii) to require that the operator, upon relatch of a BOP or LMRP, "submit a revised permit with a written statement from an independent third party certifying that the previous certification in § 250.731(c) remains valid…." This revision will provide BSEE with additional assurance that the related equipment is fit for service upon relatch and clarifies the necessary submittal and associated information required in order to receive District Manager approval. This addition reflects current BSEE practice and is the same information operators must submit with the required BSEE permits. This provides assurance that the specified BOP certifications are still valid and provides consistent documentation of recertification. Corresponding edits are also made to §§ 250.734 and 738.

BSEE is also revising paragraph (d) to clarify that operators need only meet the requirements from the proposed rule for subsea completed wells with a tree installed that have a shut-in tubing pressure that is greater than the hydrostatic pressure of the water column, or subsea wells that are not capable of having the annulus monitored. This revision will help ensure that operators have available the appropriate intervention tools for wells with higher risk potential, and will reduce the unnecessary burden of applying this new requirement to lower risk wells.

Summary of Comments:

Comments related to proposed § 250.720(a) – Retesting the deadman system

Summary of comments: Some commenters expressed concerns with the requirement in § 250.734(b), incorporated here, to re-test the deadman systems when they have not been repaired or affected by the suspension. The commenters recommend not to test the deadman upon relatch. The commenters asserted that, while it is important to verify that the system is functional, in cases where the system has not been modified, the previous test should be sufficient.

- **Response**: BSEE disagrees with the comments. When the functional system is disconnected, whether it is modified or not, it is important to ensure that the emergency systems are completely functional upon reconnection of that system. The deadman system functionality is verified by testing that system, as required by this regulation.

Comments related to proposed §§ 250.720(a)(3)(iii), 734, and 738 – Independent third party re-verifications.

Summary of comments: A commenter recommended that BSEE require a report from an independent third party if the events listed in § 250.720(a)(1) would invalidate a verification submitted pursuant to §§ 250.731(d) and 250.732(c).

- Response**:** BSEE agrees with the commenter and added a requirement for submitting a revised permit with a written statement from an independent third party certifying that the previous certification under § 250.731(c) remains valid. BSEE also made corresponding edits to similar requirements in §§ 250.734 and 738. These revisions help ensure that the BOP is still fit for service at the same location following relatch after disconnect.

Comments related to proposed § 250.720(d) – Intervention equipment requirements

Summary of comments: Multiple commenters expressed concerns with the proposed requirements related to the availability of intervention equipment. Commenters asserted that the proposed requirements were "overly prescriptive" and would place undue financial burden on operators. The commenters proposed replacing § 250.720(d) with language that requires operators to prepare and have available a well intervention readiness plan based on a risk analysis, and that only requires the equipment identified as necessary through that plan to be available for use and BSEE inspection. Additionally, one of the commenters recommended adding a definition for "readily available."

- **Response:** BSEE agrees with the commenter's recommendation that the operator should determine the required intervention equipment based on an analysis of the risks associated with a well. Accordingly, BSEE revised proposed § 250.720(d) to limit the intervention equipment requirements to subsea completed wells with a tree installed, that have a shut-in tubing pressure that is greater than the hydrostatic pressure of the water column, or that are not capable of having the annulus monitored. BSEE wants to ensure that appropriate intervention equipment is available and properly maintained for higher risk wells, but not to impose unnecessary burdens through application of these new requirements to low risk wells. BSEE disagrees with the recommendation to define "readily available" because it would be impractical to establish uniform requirements for the deployment timeframe of the intervention equipment due to the variability of equipment and logistics for each well location. Operators should not rely on SCCE for routine intervention operations where intervention equipment is required.

What are the requirements for prolonged operations in a well? (§ 250.722)

This section of the existing regulations specifies actions necessary to determine well integrity for operations continuing longer than 30 days from a previous casing or liner test. If well integrity has deteriorated to a level below minimum safety factors, this section requires repairs or installation of additional casing and subsequent pressure testing, as approved by the District Manager.

Summary of proposed revisions:

BSEE proposed to revise the prolonged operations well casing reporting requirements in paragraph (a)(2) of this section to clarify that BSEE does not require District Manager approval to resume operations if an operator conducts a successful pressure test as already approved in the applicable permit. BSEE also proposed to clarify that operators must document the successful pressure test results in the Well Activity Report (WAR), and also proposed minor revisions to this paragraph to provide that the calculations are used to "indicate" not "show" that the well's integrity is above the minimum safety factors.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

What additional safety measures must I take when I conduct operations on a platform that has producing wells or has other hydrocarbon flow? (§ 250.723)

This section of the existing regulations requires additional safety measures (*e.g.*, installation of an emergency shutdown station for the production system, and shutting in producing wells for certain rig movements) for operations on a platform that has a producing well or other hydrocarbon flow.

Summary of proposed revisions:

BSEE proposed to revise this section by removing the phrase “or lift boat.” This would primarily impact paragraph (c)(3), which requires a shut-in of all producible wells located in the affected wellbay when a lift boat moves within 500 feet of the platform until the lift boat is in place, secured, and ready to begin operations.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and includes the proposed language in the final rule without change. BSEE received comments in general support of and opposition to the proposed changes in addition to the following specific, substantive comments.

Summary of Comments:

Comments related to proposed § 250.723 – Lift boat activities

Summary of comments: A commenter recommended requiring lift boats to approach platforms from the opposite side of subsea pipeline placement, which the commenter understands is the current industry-accepted practice. The commenter also asserted that the specific regulations should take into consideration the type of work the lift boat is performing to help minimize unnecessary shut-ins.

- **Response:** BSEE agrees that operators should consider subsea infrastructure when positioning any type of bottom supported vessels. BSEE is not including the commenter’s recommendations in the regulations due to the diverse equipment, multiple possible subsea configurations, and varying operational situations presented by impacted operations. They are likewise outside the scope of this rulemaking. Removal of lift boats from this provision should address the commenter's concerns regarding unnecessary shut-ins.

Comments related to proposed § 250.723 – Lift boat size

Summary of comments: Multiple commenters expressed concerns with the removal of lift boats from this section. However, the commenters also suggested that, if the current regulations are too onerous, the shut-in requirement should only apply to lift boats that are above a certain size or class, or when lift boats approach during more challenging weather or environmental conditions that could make mooring more difficult.

- **Response:** BSEE generally agrees with the commenter that different lift boat sizes may present different risks; however, BSEE is not making any changes to this section of the proposed rule. BSEE determined that the vast majority of lift boats used on the OCS are relatively small compared to the size of a MODU and would not typically be expected to have the same operational impacts and potential risks as a MODU. BSEE is considering the effects of the size of lift boats for potential future rulemakings, and may gather additional information and provide guidance on a case-by-case basis for any lift boats that could reasonably be expected to have an operational impact comparable to a MODU.

What are the real-time monitoring requirements? (§ 250.724)

This section of the existing regulations requires operators to gather and monitor real-time well data when conducting operations with a subsea BOP or with a surface BOP on a floating facility, or when operating in an HPHT environment, and to develop a real time monitoring (RTM) plan detailing how the operator will develop and utilize RTM.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise this section by removing many of the prescriptive real-time monitoring requirements and moving towards a more performance-based approach. BSEE proposed to remove existing paragraph (b) with its associated prescriptive requirements, and to re-designate existing paragraph (c) as paragraph (b), with minor revisions to shift certain prescriptive elements to be more performance-based. BSEE also proposed to continue requiring the items in existing paragraph (c) in an RTM plan.

Summary of final rule revisions:

BSEE received and considered comments on this section, and is revising proposed paragraph (a)(2) to clarify that it relates to monitoring of "the well's active fluid circulating system." This revision would clarify the intent of the 2016 WCR RTM requirements and ensure that the system used for circulation of the well fluid is properly monitored, while removing any implication that RTM is required for fluids not in active circulation. BSEE is also adding back in clarifying language similar to the first sentence in existing paragraph (b) (with certain prescriptive elements removed), as follows: "(b) You must transmit these data as they are gathered, barring unforeseeable or unpreventable interruptions in transmission, and have the capability to monitor the data, using qualified personnel in accordance with a real-time monitoring plan, as provided in paragraph (c) of this section." BSEE is also re-designating proposed paragraph (b) as final paragraph (c) with no other changes to the remainder of the proposed section. These revisions address comments received about clarifying who will be monitoring the data by making that a matter to be addressed in the RTM plan. These revisions do not alter the requirements of the substantive RTM operational capabilities and what is addressed within the company-specific RTM plan.

Summary of Comments:

Comments related to proposed § 250.724 – Performance-based Real Time Monitoring Plan

Summary of comments: Some of the commenters support the transition from prescriptive requirements to a performance-based Real Time Monitoring (RTM) plan. The commenters assert that a performance-based approach will allow them to develop plans that are tailored to the operating conditions, risk profiles, and operator policies and procedures for specific wells.

- **Response:** BSEE agrees in part with the commenters' assertion that a performance-based approach has the potential to align an operator's RTM plan more effectively with a specific well's operating condition and risk profile. BSEE is establishing an initial framework for RTM and may supplement the regulations with additional operational provisions as more experience and research becomes available.

Comments related to proposed § 250.724 – Scope and Applicability of Real Time Monitoring Plan

Summary of comments: Some of the commenters support limiting the scope of RTM plans to drilling operations only and providing operators with discretion regarding whether or not to include workover, completion, and decommissioning activities in their RTM plans. On the other hand, multiple other commenters assert that RTM should apply to all operations.

- **Response:** BSEE currently requires RTM for all operations conducted with a subsea BOP, surface BOP on a floating facility, and BOPs used in HPHT environments. BSEE is not making any changes to this requirement. As explained in the regulations, the RTM requirements are located in Subpart G, which covers operations and equipment associated with drilling, completion, workover, and decommissioning activities. BSEE agrees with the commenters that RTM should apply to drilling, completion, workover, and decommissioning operations because all the operations have similar potential hazards and risks, and are also usually conducted utilizing the same types of rigs and equipment.

Summary of comments: Some of the commenters request that BSEE apply RTM only to the operations covered in API Standard 53, reduce the data retention period for RTM data from 2 years to 90 days, and clarify that an RTM monitoring center located onshore is not required.

- **Response:** BSEE disagrees with the comments regarding restricting the applicability of RTM to the scope of API Standard 53 and reducing the data retention timeframes. BSEE believes that it is important for the RTM requirements to apply to all operations conducted with a subsea BOP, surface BOP on a floating facility, and BOPs used in HPHT environments because these types of operations usually have the highest potential for hazards and increased risks. The regulations allow the operator to tailor its approach toward monitoring the specific operational components covered under paragraph (a) in the context of the specific rig and operation through the RTM plan. BSEE is also establishing an initial framework for RTM and may supplement the regulations to include a reduced time period for data retention as more experience and research becomes available. For now, BSEE believes that the longer data retention window is important to ensure the availability of needed data.

  BSEE agrees with the commenters that an onshore RTM monitoring center is not required. With currently available technology, operators are capable of using RTM remotely on computers and tablets using web based applications. This allows for subject matter experts to utilize the data anywhere and at any time as necessary, as detailed in the company's RTM plan. BSEE requires the operator to identify in the RTM plan how the RTM data will be transmitted and monitored, requires the rig personnel and monitoring personnel to be separate individuals, and requires certain communication capabilities among personnel, but does not prescriptively dictate the establishment of an onshore monitoring center.

Comments related to proposed § 250.724 – Weakening Real Time Monitoring Plan Requirements

Summary of comments: Many of the commenters oppose BSEE's proposed elimination of prescriptive requirements for RTM plans and adoption of a performance-based approach. The commenters also assert that the proposed rule: lacks meaningful standardization of RTM requirements; does not provide sufficient oversight if operators are not required to transmit data onshore in real time for monitoring by qualified personnel; and should not limit the requirements to drilling operations. As the basis for opposing the removal of prescriptive requirements for RTM plans, many of the commenters cite the findings and recommendations of the post-*Deepwater Horizon* investigations and reports as well as the rationales that support the RTM requirements found in the 2016 WCR.

- **Response:** BSEE is establishing an initial framework for RTM and may supplement the regulations with additional operational provisions as more experience and research becomes available. Even though the 2016 RTM requirements have a compliance date of April 29, 2019, a majority of the operators already utilize many of the RTM capabilities within their current operations. BSEE was able, through increased interaction with these companies, to better understand the logistical and operational considerations for implementation of the RTM requirements. The 2016 WCR's RTM requirements were themselves largely performance-based, relying primarily on the operator's development of an RTM plan tailored to its operations but built off of core principles. The revisions implemented here do not reflect a sea change in philosophy, but rather merely remove certain unnecessarily prescriptive elements (e.g., specifying that the RTM data must be transmitted onshore, certain communications protocols, and that monitoring personnel must be onshore). Notwithstanding the performance-based nature of these revisions, BSEE agrees that it is important to retain specific requirements concerning data transmission and has revised the proposed RTM requirements to preserve content similar to the first sentence of existing paragraph (b), due to confusion from the commenters about who is allowed to monitor the data. BSEE bases this revision on comments received seeking clarification regarding who must monitor the data, but does not require changes to RTM operations or the contents of the company-specific RTM plan. This revision clarifies who must monitor the RTM data as described in the RTM plan. In accordance with paragraph (c)(5) and (6), BSEE requires the rig personnel and monitoring personnel to be separate individuals. Additionally, the updated regulations still establish requirements for RTM processes and systems.

Comments related to proposed § 250.724 – RTM verification

Summary of comments: Multiple commenters recommend that BSEE periodically verify that operators are implementing their RTM plans via audits conducted by the agency, a BAVO, or an independent third-party. The commenters also recommend that BSEE clarify the process by which the implementation of RTM requirements will be verified and enforced.

- **Response:** This regulation requires that operators develop and implement RTM plans, and specifically requires that those plans be made available to BSEE upon request. If BSEE has any concerns with an operator's RTM operations, then BSEE may undertake inspections and enforcement actions to ensure compliance with the regulations. BSEE has additional options such as routine onsite inspections or verifications through the permitting process to ensure that RTM plans are implemented in compliance with the regulations.

What are the general requirements for BOP systems and system components? (§ 250.730)

This section of the existing regulations includes requirements for the design, fabrication, installation, maintenance, inspection, repair, testing, and use of BOP systems and components. This section also requires compliance with certain provisions of API Standard 53 and several related industry standards, and requires operators to use failure reporting procedures.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraph (a) by removing "excluding casing shear" and replacing "at all times" with "in the event of flow due to a kick." BSEE requires the BOP system as a whole to be capable of closing and sealing the wellbore. BSEE also proposed to clarify that the BOP system must be able to close and seal the wellbore in the event of flow due to a kick. BSEE knows there are mechanical and operational design limits of equipment, and expects operators to ensure ram closure time and sealing integrity to avoid exceeding those operational and mechanical limits.

BSEE proposed to amend paragraph (b) to clarify that BSEE expects the use of "applicable" OEM recommendations for the design, fabrication, maintenance, and repair of BOP systems, as well as personnel training in their use. The proposed revision to include "applicable" is necessary because some OEMs may not have specific recommendations for every item required by this paragraph.

BSEE also proposed to revise the failure reporting requirements in paragraph (c) to codify BSEE guidance and current practice. BSEE proposed to remove the failure reporting references to ANSI/API Specs 6A and 16A because the failure reporting process outlined in those standards is redundant to API Standard 53 and the remaining requirements of this section. Proposed revisions to this paragraph also included clarification on submitting failure data and reports to BSEE, unless BSEE has designated a third party to collect the data and reports, and ensuring that an investigation and failure analysis are started within 120 days. BSEE reevaluated the timeframes set forth in the 2016 WCR for performing the investigation and failure analysis and determined that certain operations would preclude operators from meeting the original timeframes. Accordingly, BSEE proposed to require that operators start their investigation and failure analysis within 120 days of the failure. BSEE then proposed a 120-day timeframe for the operator to complete the investigation and failure analysis once they have started the process.

BSEE proposed to revise paragraph (c)(4) to explain that BSEE may designate a third party to collect failure data and reports on behalf of BSEE, and if it does so, operators must send the failure data and reports to the designated third party.

BSEE also proposed to revise paragraph (d) by removing the reference to a document incorrectly incorporated by reference, and incorporating the correct document. The regulations promulgated pursuant to the 2016 WCR require that BOP stacks be manufactured pursuant to a quality management system certified by an entity that meets the requirements of ISO 17011. The reference to the ISO 17011 standard in the 2016 WCR is incorrect, and BSEE proposed to correct the error by incorporating the ISO/IEC 17021-1 standard.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions, and includes in the final rule most of the proposed language without change, except for the following revisions to paragraph (c). BSEE is revising proposed paragraph (c) by replacing the references to “BSEE” with "the Chief, Office of Offshore Regulatory Programs (OORP)" for purposes of directing where to send submittals, and adding the address for the Chief of OORP in paragraph (c)(4). These revisions clarify to whom and where to send failure reporting submittals within BSEE, unless BSEE designates a third party to receive that information. Based on comments received, BSEE is also clarifying how to request an extension to the failure analysis timeframe. BSEE is adding to paragraph (c)(2) a requirement that, if an operator cannot complete the investigation and analysis within the allotted time, they must submit a request for an extension of time detailing how the investigation and analysis will be completed. The request for an extension of time must be submitted for approval to BSEE through the Chief of OORP.

Summary of Comments:

Comments related to proposed § 250.730 – What are the general requirements for BOP systems and system components?

Casing shear ram requirements

Summary of comments: BSEE received a comment regarding the proposed changes to § 250.730(a) removing the phrase "excluding casing shear" from requirements for the BOP. The commenter expressed concern that BSEE's justification refers to the fact that BSEE "expects operators to ensure ram closure time and sealing integrity before exceeding those operational and mechanical limits." The commenter asserted that BSEE should clearly define and state these expectations in the regulations. The commenter also asserted that BSEE should confirm all relevant specifications through their permitting process, inspection program, and performance testing requirements, asserting that API Standard 53 and API Spec 16D include details about the accumulator system that enable BSEE to confirm compliance.

- **Response:** BSEE disagrees with the comment. The requirements in this section ensure that operators properly design, install, maintain, inspect, test, and operate each BOP component and the entire BOP system. The requirements of this section apply to the entire BOP system, including the casing shear. BSEE requires the BOP system as a whole to be capable of closing and sealing the wellbore before exceeding mechanical or operational limits of the equipment. BSEE reviews compliance with the incorporated documents through the permit and inspection process.

Comments related to proposed § 250.730(c) – Failure reporting requirements

Summary of comments: A commenter recognized BSEE's efforts related to the reporting, analysis, and use of failure data. However, the commenter was concerned that the proposed changes to failure reporting do not provide a clear definition of a reportable failure.

- **Response:** BSEE disagrees that the definition of failure provided in § 250.730(c)(1) is unclear. The definition aligns with the definition used by the Blowout Preventer Reliability Joint Industry Project (JIP), a joint effort of the International Association of Drilling Contractors (IADC) and the International Association of Oil and Gas Producers (IOGP). This definition is generally used and understood by the industry and adopted in the SafeOCS implementing guidance, which was informed by input from the JIP.

Comments related to proposed § 250.730(c) – Timing of failure investigations

Summary of comments: Multiple commenters expressed concern regarding the timing requirements related to failure investigations. One commenter recognized that BSEE did propose to add additional time for the investigation, but asserted that this did not address potential extenuating circumstances (operational or investigation related) that may prevent the operator from completing an investigation within 120 days. Therefore, the commenter requested that BSEE include a provision in the final rule to address investigations that cannot be completed within the allotted time. The commenter proposed that the provision require operators to provide a progress report, reasons regarding why the investigation was not completed, and a defined period for the extension.

- **Response:** BSEE disagrees with including a provision that would allow operators a blanket extension of the 120 days to complete the failure analysis. The final rule provides adequate time for an operator to initiate and complete a failure analysis. BSEE does, however, acknowledge that there may be extenuating circumstances that prevent an operator from meeting these timelines. Accordingly, the final rule provides that the operator may request an extension to the failure analysis timeframes by submitting a request to the Chief, OORP and, if appropriate, BSEE may approve an extension. The nature of certain operational failures -- such as systematic failures, stack pulls, and lower marine riser pulls -- may warrant additional case-by-case consideration, as it is reasonable to expect the related analyses would require more time than allowed in the rule. In 2017, only 1.5% of the reported failure notifications resulted in an investigation and failure analysis that required more than 120 days to complete. BSEE extended the timeframe in the final rule to reduce its own administrative burden for those cases where extra time could enable the timely resolution and completion of an investigation and analysis report. For those rare cases requiring more time, BSEE believes that providing for an extension request is appropriate and that the request may reasonably be expected to include the items recommended by the commenter.

Summary of comments: A commenter stressed that the failure investigation and submittal of the reports to BSEE should occur as soon as practicable, preferably immediately after the failure. The commenter asserted that, for conducting a failure investigation and analysis, it makes more sense to provide a required time "from the time equipment first becomes available for testing" and not from the time of the incident. In addition, the commenter asserted that, in addition to an option for operators to request an extension, there should be a provision for BSEE to require an accelerated investigation, if warranted by the circumstances. The commenter also suggested that BSEE should not tie the failure analysis to continuing well operations, asserting that continuing well operations should depend on the replacement of the failed equipment with properly functioning equipment.

- **Response:** BSEE agrees that an investigation and failure analysis should occur as soon as practicable after a failure. For subsea BOP operations, equipment is not readily available for investigation until it is returned to the surface. If BSEE were to tie the requirement to begin the investigation and failure analysis to the time the equipment becomes available for testing, rather than the time of the incident, it could result in delays in commencing the investigation. BSEE believes that the new timeframes provide ample time for commencing the investigation without leaving the timing open and indefinite.

  BSEE disagrees that a provision is needed for BSEE to require accelerated investigations. BSEE has determined that the timeframes required by the final rule are reasonable for conducting timely and thorough investigations, given that they will generally involve multiple parties and complex, large equipment.

  BSEE disagrees that the continuation of well operations should always require the replacement or repair of failed equipment. BSEE regulations require redundant components for well control. Thus, in some cases, well operations may continue following an equipment component failure.

Summary of comments: A commenter asserted that allowing the same amount of time to initiate the failure investigation as to perform and complete the investigation does not seem appropriate. The commenter asserted that an operator should start the investigation within 30 days, and then complete the investigation within 120 days of commencement. The commenter also suggested that if the operator cannot complete the report within the timeframe allotted, the operator should submit monthly progress reports to show progress towards a solution. Another commenter observed that the proposed changes would essentially double the time permitted for failure investigation, thereby delaying completion of the investigation by four months. This commenter asserted that delaying a failure investigation does not make sense because the purpose of this requirement is to inform BSEE and the manufacturer of problems, so those problems may be resolved quickly in order to prevent other accidents or failures.

- **Response:** The commenter's assumption that operators will use all available time to delay a submission does align with BSEE's experience with the recent history of reporting since the rule implementation began. BSEE's experience shows operators to be making a good faith effort to complete investigations as soon as practicable. Based upon a substantial number of submissions, BSEE expects most submitters will have completed their investigation and analysis reports long before the allowable time runs. In 2017, only 1.5% of the reported failure notifications resulted in an investigation and failure analysis that required more than 120 days to complete. The provision in the rule allows extra time for the moderately complicated cases that require more time to process. For example, the nature of certain operational failures -- such as systematic failures, stack pulls, and lower marine riser pulls -- may warrant additional case-by-case consideration, as it is reasonable to expect the related analyses would require more time beyond that allowed in the rule. BSEE extended the timeframe in the final rule to reduce administrative burden for those cases where extra time could enable the timely resolution and completion of an investigation and analysis report. For those rare cases requiring more time than the rule allows, BSEE believes that providing for an extension request is appropriate. BSEE does not, however, expect these revised timelines to result in general delays of the type described by the commenter.

We agree with the commenter that it is important for BSEE and the manufacturer to acquire and review the equipment failure information to make recommendations to prevent similar failures in the future. BSEE works with the U.S. Department of Transportation's Bureau of Transportation Statistics (BTS),[29] to ensure technical review of the information provided by submitters. The analysis considers potential consequences related to specific failures, potential systematic concerns, and any reduction in effective barrier operation. When significant safety concerns are identified, there are processes in place to raise awareness in a timely manner to prevent similar failures. Items of lesser potential significance are dealt with through public reports based on aggregated data.

[29] Operators submit failure information through www.SafeOCS.gov, where it is received and processed by BTS. BSEE identified BTS as the designee and recommended that SPPE failure information should be sent to BTS via www.SafeOCS.gov through a press release issued on October 26, 2016 (https://www.bsee.gov/newsroom/latest-news/statements-and-releases/press-releases/bsee-expands-safeocs-program). BSEE and BTS entered into a Memorandum of Understanding (MOU) that provides for BTS to collect BOP and SPPE failure reports. The MOU may be viewed on BSEE's website at: https://www.bsee.gov/sites/bsee.gov/files/bsee-bts-mou-08-18-2016_0.pdf. Reporting instructions are on the SafeOCS website at: https://www.SafeOCS.gov.

Summary of comments: A commenter suggested that the rule include a method to extend investigations that have been started, but are not complete within the 120 days. This commenter recommended including a requirement for the operator to submit a status update to BSEE detailing the progress to date, the reasons why the investigation was not completed within the required timeframe, and an extension period, if any. The commenter is concerned that the fixed number of 120 days may result in conclusions that do not identify the true root cause, thereby ultimately compromising safety.

- **Response:** BSEE disagrees with allowing a blanket extension of the 120-day completion date for the failure analysis. BSEE does, however, acknowledge that there may be extenuating circumstances that prevent an operator from meeting these timelines. Accordingly, the final rule provides that if an operator cannot meet the required timeframes, the operator may request an extension to the failure analysis timeframes by submitting a request to the Chief, OORP and, if appropriate, BSEE may approve an extension. Due to the potential for some failures to have broader safety implications, it is not reasonable to allow the operator to define an open-ended period in which to complete the investigation. Extension requests will be handled on case-by-case basis to allow consideration of circumstances. In 2017, only 1.5% of the reported failure notifications resulted in an investigation and failure analysis that required more than 120 days to complete. BSEE extended the timeframe in the final rule to reduce administrative burden for those cases where extra time could enable the timely resolution and completion of an investigation and analysis report. For those rare cases requiring more time than the rule allows, BSEE believes providing for an extension request is appropriate and that such a request may reasonably be expected to address the items recommended by the commenter.

Summary of comments: A commenter asserted that proposed § 250.730(c)(1) would reduce the clarity, safety, and effectiveness of BOP systems by limiting information exchange about equipment failures. The commenter opposed the proposed language because it does not specify who the operator must notify at BSEE or other entities, such as the equipment manufacturer. The commenter also asserted that the use of third parties to receive data and reports on behalf of BSEE will make it substantially more difficult for the public to acquire those data and reports using the Freedom of Information Act (FOIA). The commenter contends that because the focus is on equipment failure, it would be important for technical experts to acquire and review the equipment failure information to make recommendations to prevent similar failures in the future. The commenter supported the 120-day failure analysis completion date in the existing regulations, asserting that this timeframe ensures that any needed equipment changes are quickly identified, and changes can be made at problematic wells as soon as possible to prevent additional failures.

- **Response:** BSEE disagrees with the assertion that the language in paragraph (c)(1) will "reduce the clarity, safety, and effectiveness of BOP systems by limiting information exchange about equipment failures." In terms of specifying to whom data should be submitted, BSEE agrees that this was less than clear with respect to submissions to BSEE, and accordingly modified the proposed rule text to clarify that submissions directed to BSEE should be sent to the Chief, OORP. With respect to a third party designated to receive data, BSEE can provide information on who operators should submit this data to through a variety of public notices, such as a press release or NTL.

Not including these specifics in the regulations allows BSEE to change the designated third party without undertaking rulemaking. With respect to reporting to equipment manufacturers, it is up to the operator to find out from the equipment manufacturer to whom the required data and information should be submitted.

With respect to the use of a third party to receive data, as previously discussed, BSEE currently has an agreement with BTS to receive and process the data through the SafeOCS program. This agreement is consistent with the policies of the Confidential Information Protection and Statistical Efficiency Act (CIPSEA).[30] CIPSEA requires that BTS treat and store such reports confidentially, under strict criminal and civil penalties for noncompliance. Information submitted under CIPSEA also is protected from release to other government agencies (including BSEE), from Freedom of Information Act (FOIA) requests and subpoenas. If the information were to be submitted to BSEE, BSEE could only protect its confidentiality to the extent allowed by Federal law other than CIPSEA. The SafeOCS program was designed to protect the confidentiality of information submitted and promote failure reporting without fear of reprisals. BSEE uses this third-party approach for submission of equipment component failure information in the interest of promoting the sharing of safety data and information, while protecting sensitive identifying information the release of which could reduce the incentive to share all of the facts related to an incident. This determination was made to protect trade secrets and proprietary information and especially to ensure facts that

[30] Reports submitted through www.SafeOCS.gov are collected and analyzed by BTS and protected from release under the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) (44 U.S.C. § 101). Annual reports for 2016 and 2017 reporting periods for well control regulations are available at: https://www.safeocs.gov/wcr_home.htm.

pertain to safety are not left out of reports due to concerns about disclosure under FOIA. BSEE believes placing this raw data at risk of disclosure under FOIA would reduce operator openness in what is shared regarding equipment component failures. For this reason, the Bureau of Transportation Statistics currently houses BSEE's system of record on this collection effort.

We agree with the commenter that it is important for technical experts and others to acquire and review the equipment failure information to make recommendations to prevent similar failures in the future. BTS engages subject matter experts to analyze the reports and prepare public reports that are available to all stakeholders. BTS has the ability under CIPSEA to have a confidentiality officer from BTS communicate with a respondent when safety issues arise of particular concern to subject matter experts. The BTS confidentiality officer may recommend that the submitter of the information communicate the safety issue directly with BSEE and the OEM.

In addition, § 250.730(c)(1) requires that operators follow the failure reporting procedures in API Standard 53, which is incorporated by reference in BSEE regulations at § 250.198. API Standard 53 includes processes for the sharing of equipment failure information between the manufacturers and owners of blowout prevention equipment. This would include reporting of any malfunction or failure by the equipment owner to the equipment manufacturer and the manufacturer's response to the equipment owner with a timeline for failure resolution.

Comments related to proposed § 250.730(c) – Anonymous failure reporting

Summary of comments: One commenter expressed concern that the proposal to allow companies to anonymously submit the results of equipment failure investigations through a third-party would effectively make the failure reporting requirement voluntary.

- **Response:** BSEE disagrees. The failure reporting is required regardless of where and how an operator submits the data. This revision does not provide for anonymous failure reporting through a designated third party. The failure reporting is not anonymous. Each time BTS receives a notification of failure under § 250.730(c), it provides BSEE with a notification that a submission was made and includes the name of the company. BSEE may choose to open an investigation at any time when information received from non-BTS sources demonstrates operators are not complying with the requirements. However, it is important to note, BSEE does not receive any information from BTS about a single failure report other than the name, submittal date, and reference ID numbers of the report of the reporting company.

  BTS maintains the raw data and entity information to allow aggregated reporting. BTS also has measures available under CIPSEA whereby a confidentiality officer from BTS may communicate with a respondent when safety issues of particular concern to subject matter experts arise and warrant immediate action. Thus far, BSEE has observed a close correlation between the companies engaged in drilling activity and those reporting equipment component failures.

Comments related to proposed § 250.730(d) – BOP stack manufacturing requirements

Summary of comments: A commenter recommended that BSEE add the phrase “or stack sub-assemblies” to the BOP stack manufacturing requirements under § 250.730(d). The commenter asserted that this change would clarify that the rule covers the overall BOP stack and the component assemblies contained within the stack.

- **Response:** BSEE disagrees with this recommendation. The commenter did not provide enough information or justification to substantiate the recommended change. Stack sub-assemblies are part of the BOP stack; therefore it is BSEE's view that they are already covered under these requirements.

Comments related to proposed § 250.730(b) – Corrective Maintenance

Summary of comments: A commenter recommended that BSEE remove "maintenance" and "repair" from the requirement for the operator to follow original equipment manufacturer (OEM) recommendations for the BOP systems in § 250.730(b). The commenter suggested adding "remanufacture" to this requirement. According to the commenter, the recommended changes would ensure consistency with API 53, further noting that maintenance is covered in § 250.730(a).

- **Response:** BSEE disagrees with the comment. The OEM designs the equipment according to detailed specifications. Therefore, the OEM recommendations, if they exist, for maintenance and repair are important for ensuring the condition of the equipment remains within the design limits. BSEE is not adding "remanufacture" because this is covered under "repair".

Comments related to proposed § 250.730 – Proposed revisions reduce operational requirements for BOPs

Summary of comments: A commenter asserted that the proposed revisions in § 250.730 would reduce the conditions under which a BOP must function, while increasing the time allowed for operators to investigate and report on a BOP failure. The commenter asserted that the proposed revisions would only require a BOP to be capable of closing and sealing a wellbore "in the event of flow due to a kick," eliminating the existing language that requires a BOP to be capable of closing and sealing the wellbore "at all times." The commenter emphasized that there are other conditions that may necessitate closure and sealing besides a kick, such as an approaching hurricane or a fire or other malfunction. This commenter asserted that the proposed change would substantially narrow the conditions under which a BOP would be required to be capable of closing.

- **Response:** BSEE disagrees. The proposed revisions would not weaken or alter the underlying requirements that the BOP system must be able to function during all operations. This section ensures that the BOP system is designed to close and seal a well in the event of flow from a kick from the well because that is representative of the most critical and challenging circumstances a BOP must address. The operator must verify the ability of the BOP to function during a non-kick event through the regular function and pressure testing as required by final § 250.737. The operator will also still be required to obtain independent third-party certification that the BOP is designed, tested, and maintained to perform under the maximum environmental and operational conditions anticipated to occur at the well under § 250.731.

Comments related to proposed § 250.730 – Incorporate API Standard 53 Addendum 1 and API Standard 53, 5th edition

Summary of comments: A commenter recommended that the incorporation by reference of API Standard 53, Blowout Prevention Equipment Systems for Drilling Wells, Fourth Edition, July 2016, should include Addendum 1 of that standard. The commenter also noted that the 5th edition of that standard is being finalized and recommended that BSEE consider the 5th edition for incorporation by reference to ensure operations on the OCS are conducted according to the latest edition of the API standard for well control systems and are consistent with operations around the world.

- **Response:** BSEE reviewed the addendum and determined it is appropriate for incorporation into the regulations. The addendum addresses multiple issues that BSEE has had to deal with through departures from compliance with the incorporated API Standard 53 (without the addendum) since the development of the 2016 WCR (*e.g.*, section 7.2.3.2.9 Side outlet location and section 7.3.13.2.5 fire rating of MUX lines). The inclusion of the addendum to API Standard 53 brings the regulations in line with the current latest edition of this standard. BSEE understands that API is developing a 5th Edition of API Standard 53, and BSEE will evaluate that document when it is finalized for possible incorporation into the regulations in a future rulemaking.

Comments related to proposed § 250.730 – Use of OEM recommended maintenance practices

Summary of comments: A commenter asserted that the OEMs do not have operational experience and the type of continuous feedback needed to develop effective maintenance practices to manage assets. The commenter also asserted that because OEMs do not need to worry about rig downtime, they can afford to be conservative. The commenter concluded that this poses a significant risk that the OEM-developed maintenance practices would require the operator to perform unnecessary maintenance and repairs. The commenter also asserted that this practice could result in OEMs leveraging this as an aftermarket revenue generator, and this approach presents a technical barrier to trade and causes a conflict of interest. The commenter generally challenged certain OEM maintenance recommendations, based on proven field results.

- **Response:** This regulation does not require the OEM to perform the maintenance or train the personnel performing maintenance. With regard to the OEM recommendations, operators are required to comply only with applicable OEM recommendations to the extent that they exist. If an operator has a specific issue with OEM recommendations, BSEE may recognize other alternative procedures. OEMs of offshore operational equipment generally maintain close communications with operators and drilling contractors, including coming on location as needed. OEMs develop maintenance procedures through an effective communication program including practices for sharing information under API Standard 53 and through notification requirements under this final rule.

  The TBT Agreement seeks to avoid unnecessary obstacles to international trade, in part by requiring that technical regulations and conformity assessment procedures be consistent with international standards promulgated by international standards developing organizations (SDOs). This rule does not create a technical barrier to trade because it is neutral as to the national origin of regulated equipment. The proposed rule did not, and this final rule does not, discriminate in favor of U.S.-fabricated equipment. The final rule is equally applicable to all relevant equipment, regardless of the equipment's country of origin. Accordingly, BSEE's proposed rule did not, and the final rule does not, create an unnecessary technical barrier to trade.

Comments related to proposed § 250.730 – Use of word "applicable" for applying OEM recommendations

Summary of comments: A commenter asserted that "applicable" is subjective and the proposed rule is not clear about who determines if an OEM recommendation is applicable. The commenter was concerned that an operator or drilling contractor could decide to simply disregard OEM recommendations as not applicable. The commenter recommended changing the proposed regulations to state that the operator must follow the OEM recommendations unless BSEE directs them otherwise or they receive other directions in writing from the OEM.

- **Response:** BSEE disagrees. As BSEE explained in the proposed rule preamble, and included in the final § 250.730(b) clarifies that BSEE expects the use of "applicable" OEM recommendations for the design, fabrication, maintenance, and repair of BOP systems, as well as personnel training in their use. The proposed revision to include "applicable" is necessary because some OEMs may not have specific recommendations for every item required by this paragraph, and operators are not required to follow recommendations that are not applicable to the relevant equipment or operation. BSEE expects operators to follow OEM recommendations to the extent relevant recommendations exist.

Comments related to proposed § 250.730(a) – Request to incorporate API RP 59

Summary of comments: A commenter recommended that BSEE incorporate by reference API Recommended Practice 59, Second Edition - Recommended Practice for Well Control, Section 4.4 in § 250.730(a). The commenter asserts that the methodology of API RP 59, section 4.4 focuses on one open hole interval of flow, not on the entire open well bore interval pertinent to the worst case discharge. This addresses the long-standing, safe well control practice of drilling 10 to 20 feet into a drilling break or a prospective hydrocarbon interval, then stopping drilling operations to "check for flow" as the proven method of determining a kick in a well.

- **Response:** BSEE will evaluate API RP 59 for possible incorporation by reference in a future rulemaking. Operators should develop appropriate control procedures based on specific well and site conditions and accepted good engineering practices.

Comments related to proposed § 250.730 – BOP system requirements

Summary of comments: A commenter strongly opposed the proposed revisions to requirements in §§ 250.730, 250.733, and 250.734 regarding the BOP systems. The commenter expressed concern that the proposed revisions would allow the use of BOPs that cannot close and seal a wellbore under the range of conditions encountered, including high-pressure, high-temperature drilling environments. The commenter noted that the existing language in § 250.730(a) is unambiguous regarding the key capabilities of the BOP system, stating that the BOP system is required to be able to close and seal the wellbore at all times. The commenter asserted that the proposed rule would weaken this language by specifying only certain circumstances in which the BOP system must function, i.e., only in the event of flow due to a kick.

- **Response:** BSEE disagrees. The revisions do not weaken or alter the underlying requirement that the BOP system must be able to function during all operations. This section specifically ensures that the BOP system is designed to close and seal a well in the event of flow from a kick from the well because that is representative of the most critical and challenging circumstances a BOP must address. The operator is required to verify the ability of the BOP to operate in a non-kick event through regular function and pressure testing required by § 250.737. The regulation still requires that the operator obtain independent third-party certification that the BOP is designed, tested, and maintained to perform under the maximum environmental and operational conditions anticipated to occur at the well under § 250.731.

What information must I submit for BOP systems and system components? (§ 250.731)

This section of the existing regulations details the information that must be included in the applicable BSEE permit (*e.g.*, APD or APM) for any operation that uses a BOP. The required information includes a complete description of the BOP system and system components, schematic drawings, and verifications demonstrating that the BOP is fit for service on the applicable well.

Summary of proposed revisions:

BSEE proposed to revise the information submitted to BSEE pursuant to paragraph (a)(5) by replacing “to achieve an effective seal of each ram BOP” with “to close each ram BOP.” This revision would affect information submitted to BSEE and would more accurately align with the control system and regulator control setting requirements of API Standard 53.

BSEE also proposed to revise this section by removing the BAVO verification requirements in existing paragraphs (d) and (f). The BAVO verifications required by existing paragraphs (d)(1) and (d)(3) were redundant to the verifications required by paragraph (c). However, the verifications required by current paragraph (d)(2) are still necessary and BSEE therefore proposed to add them to revised paragraph (c). BSEE proposed to remove paragraph (f) because the Report that is the subject of that paragraph would be eliminated by the proposed revisions to § 250.732(d). The independent third-party verifications under paragraph (c) help ensure that the BOP is fit for service at each specific well. BSEE also proposed to revise this section by replacing references to a BAVO with references to an independent third party that meets the requirements of § 250.732(b).

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and includes the proposed language in the final rule without change.

Summary of Comments:

Comments related to proposed § 250.731(a)(5) – Regulator set points

Summary of comments: Multiple commenters asserted that there is a difference between sealing and closing in this context and requested clarification on the intent of the regulation. Commenters expressed concerns with BSEE's explanation and reference to API Standard 53 to adequately clarify the intent. Commenters also requested justification for the removal of the word "effective".

- **Response:** BSEE does not agree with the comments. Paragraph (a)(5) principally identifies information that must be submitted to BSEE for BOP systems and system components. Subsequent sections regulate operational and equipment requirements for these systems and components. BSEE used the term "close" because the regulator settings are not changed throughout operations. The requirements of paragraph (a)(5) only relate to the regulator set points, and do not alter any of the ram operational requirements contained in §§ 250.733 and 250.734 for surface and subsea BOPs, respectively. Some of the rams do not seal, such as the casing shear ram, and BSEE utilizes this data in the permit application to evaluate ram closing and sealing capabilities. The word "effective" in this context is not necessary and does not provide any supplemental regulatory standard.

Comments related to proposed § 250.731(c) – Applicability to coiled tubing

Summary of comments: A commenter requested clarification about the applicability of paragraph (c) to coiled tubing. The commenter also asserted that § 250.731(c)(1) can be interpreted to mean that a shear test at depth is required. In reality, the depth adjustment is a calculation based on different densities of hydraulic fluid and seawater. The commenter, therefore, recommended adding the words "and depth" to § 250.732(a)(3) so that the provision states, "Include shearing and sealing pressures for all pipe to be used in the well including correction for MASP and depth." The commenter also suggested removing § 250.731(c)(1).

- **Response:** Section 250.731(c) applies to coiled tubing; however, § 250.731(c)(4) is only applicable to the specified situations (subsea BOP, a BOP in an HPHT environment, or a surface BOP on a floating facility). BSEE disagrees with the suggestion to add the term "and depth" because the definition of MASP already takes into account depth, whether at surface or subsea. BSEE also disagrees with the recommendation to revise § 250.732(a)(3) and remove § 250.731(c)(1) because the requirements in § 250.732 are utilized to provide supporting documentation for the verifications required in § 250.731.

What are the independent third party requirements for BOP systems and system components? (§ 250.732)

This section of the existing regulations describes the criteria for an organization to become a BAVO, and identifies the circumstances in which an operator must use a BAVO to satisfy certification, verification, or reporting requirements.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise this section by removing all references to a BAVO and, where appropriate, replacing those references with an independent third party. This change would also be made in appropriate locations throughout Subpart G where BAVOs are referenced. Independent third parties have been utilized as a long-standing industry practice to carry out certifications and verifications similar to those that a BAVO would perform. Independent third parties have been performing the functions identified for BAVOs since promulgation of the 2016 WCR. Based on BSEE's determination to remove the use of BAVOs, as previously discussed under section IV of this final rule preamble, BSEE revised the section heading to reflect the change from a BAVO to an independent third party, removed paragraphs (a)(1) and (a)(3), and replaced all remaining BAVO references with references to an independent third party. The independent third-party qualifications in existing paragraph (a)(2) remain in this section, but would now be in proposed paragraph (b).

BSEE also proposed to remove the requirements in current paragraph (b)(1)(iv) to verify that testing was performed on the outermost edges of the shearing blades of the shear ram positioning mechanism. This proposed change would align the verification requirements with BSEE's proposal to remove the centering mechanism requirement from existing § 250.734(a)(16) that is the subject of this verification. BSEE also proposed to remove from existing paragraph (b)(1)(i) -- a vestigial reference to a compliance deadline that has already passed. This is merely an administrative revision.

BSEE also proposed to revise existing paragraph (b)(2)(ii) by changing the testing facilities' verification pressure testing hold time demonstration from 30 minutes to 5 minutes. This revision would allow the use of previously established historical data to help demonstrate the blind shear ram functionality in the applicable permit application.

BSEE proposed to make a minor revision to paragraph (c) to update an incorrect citation – the referenced definition of HPHT environments is found in § 250.804(b), rather than § 250.807(b), as stated in the existing regulations.

BSEE proposed to remove the Mechanical Integrity Assessment (MIA) report requirements from paragraph (d). The MIA report was required as a function of the use of BAVOs. BSEE determined that an MIA report is no longer necessary because BSEE proposed to eliminate the use of BAVOs and the information contained within the MIA report is redundant with the BOP equipment capability verifications required by § 250.731.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions, and includes in the final rule most of the proposed language without change, except for the following revisions. BSEE is revising proposed paragraphs (a)(1)(i) and (iii) and (iv) (final paragraphs (a)(1)(i) and (iii) and (v)) by replacing “drill pipe” with “tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies such as heavy-weight pipe or collars), workstring, tubing and associated exterior control lines and any electric-, wire-, and slick-line to be used in the well.” BSEE made these revisions to provide consistency with the shearing requirements of §§ 250.733(a)(1) and 250.734(a)(1)(ii). This clarification would help ensure that the shear testing applies to the required equipment that needs to be shearable. This revision does not add new equipment required for shear testing, but instead clarifies BSEE’s established practice.

BSEE also is re-designating proposed paragraphs (a)(1)(iv) and (a)(1)(v) as (a)(1)(v) and (a)(1)(vi) respectively, and retaining (in large part) existing paragraph (b)(1)(iv) to ensure that testing is performed on the outermost edges of the shearing blades of the shear ram. This retention was based on comments, and modifies the existing text of the relevant provision only to remove reference to the shear ram positioning mechanism that is no longer required under the cross-referenced regulation. BSEE is retaining in § 250.734(a)(16)(i) the centering requirement for shearing, but not requiring that it utilize a positioning mechanism. BSEE is making corresponding edits to this section to help ensure the shearing verifications and certifications align with the revised shearing requirements. This requirement helps verify that the shear rams will shear along any point of the shearing surface.

BSEE is revising proposed paragraph (a)(2) to clarify that the pressure integrity test applies to sealing components. A pressure integrity test for a non-sealing component is not practicable or feasible. BSEE is also revising proposed paragraph (a)(2)(i) to indicate that testing is conducted after the shearing is completed and prior to opening. BSEE made this revision based on comments to provide clarity for defining how the verification is conducted. BSEE revised this section to help ensure that the testing is accomplished in one continuous action to better simulate sealing after shearing in real-world well control applications.

Summary of Comments:

Comments related to proposed § 250.732(a)(1) – Definition of drill pipe

Summary of comments: A commenter asserted that the use of the word "drill pipe" throughout § 250.732(a) is not complete. The commenter recommends that BSEE include terms, such as coiled tubing, shear subs, and landing strings in this section for completeness.

- **Response:** BSEE agrees with the commenter and has revised proposed paragraphs (a)(1)(i), (iii), and (iv) by replacing "drill pipe" with "tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies such as heavy-weight pipe or collars), workstring, tubing and associated exterior control lines and any electric-, wire-, and slick-line to be used in the well." These revisions make these testing requirements consistent with the shearing requirements of §§ 250.733(a)(1) and 734(a)(1)(ii). This clarification will help ensure that the shear testing applies to the required equipment that needs to be shearable.

Comments related to proposed § 250.732(a)(2)(i) – Pressure integrity testing procedures

Summary of comments: A commenter recommended that BSEE remove "immediately" and add "after the shearing is completed and prior to opening the rams" to provide clarity to the pressure integrity testing.

- **Response:** BSEE agrees with the commenter and has revised this paragraph to reflect the commenter's recommendation, except that we have used the phrase "prior to opening the component." BSEE revised this paragraph to help ensure that the testing is done in one continuous action to better simulate sealing after shearing in real world well control applications.

Comments related to proposed § 250.732(a)(2)(ii) – Lab 30 minute vs 5 minute pressure hold time

Summary of comments: Multiple commenters oppose the proposed replacement of the existing requirements in § 250.732(b)(2)(ii) of a 30-minute hold time for a verification pressure test with the proposed § 250.732(a)(2)(ii) a 5-minute hold time. The commenters asserted that a 30-minute test is an established practice according to various standards organizations, and therefore the commenters see no reason for the change. The commenters also asserted that BSEE does not provide any analysis or data to support this change and should make any data available.

- **Response:** BSEE does not agree that holding a constant pressure for 30 minutes is necessary to demonstrate sealing capabilities. Based on BSEE experience since the promulgation of the 2016 WCR and a review of longstanding historical data demonstrating successful application of 5 minute hold time testing, BSEE concluded that

30 minute testing is unnecessary. BSEE is unaware of standards referencing a standardized 30-minute lab test pressure holding time for BOP shearing verification. However, BSEE is aware of an industry standard, API 16TR1, *Shear Ram Performance Test Protocol*, that includes field performance testing and specifies a 5 minute pressure hold time after shearing pipe. BSEE reviewed the publicly available incident data on the BSEE website to try to identify any past incidents involving failure of equipment after successfully sealing in a well, but was unable to identify any such incidents. BSEE is also unaware of any data showing lab failures during the hold times between the 30-minute and 5-minute intervals. BSEE also reviewed permits issued prior to 2010 to verify the historic lab shear and seal data hold times. Of the permits reviewed, pressure hold times did not indicate any failures after the 5-minute mark. BSEE uses this 5 minute testing data to verify that the component will provide a seal when activated.

Comments related to proposed § 250.732 – BAVOs

Summary of comments: A commenter expressed concerns about the removal of the BAVO and MIA report. A commenter recommended that in the absence of the BAVO and MIA report requirements, it is critical that BSEE ensure strict compliance with all third-party certification requirements, including the BOP equipment capability verifications required by § 250.731.

- **Response:** BSEE agrees with the commenter that it is important to ensure compliance with independent third-party certification and verification requirements. In final § 250.731(c), BSEE requires certifications by an independent third party, in lieu of a BAVO, that include verification, for a subsea BOP, a BOP in an HPHT environment as defined in § 250.804(b), or a surface BOP on a floating facility, that the BOP has not been compromised or damaged from previous service. BSEE expects full compliance with these certification requirements, regardless of who is performing the certification. The requirements of § 250.731 adequately cover the substance of the matters previously addressed in the MIA report, and BSEE expects that independent third parties will capably perform the same functions previously assigned to BAVOs, as they have since promulgation of the 2016 WCR.

Summary of comments: Multiple commenters oppose the proposed revisions to remove the BAVO, and recommend that the companies that operators use to assess blowout preventers should continue to be BSEE-certified. The commenters assert that this is important to ensure that reviews of important equipment are objective and standardized through the use of BSEE-certification of third-parties.

- **Response**: BSEE disagrees that BSEE needs to certify the parties used to assess blowout preventers. BSEE is maintaining rigorous qualification requirements for independent third parties that ensure their professional qualification and independence. The independent third party must be a technical classification society, or a licensed professional engineering firm, or a registered professional engineer capable of providing the required certifications and verifications. If BSEE becomes aware of any performance issues with an independent third party, BSEE has options for addressing the issues (*e.g.*, verifications through the permitting process).

Comments related to proposed § 250.732 – MIA report content

Summary of comments: A commenter suggested that specific items in the MIA report are not redundant of other requirements and should be included in the regulations (*e.g.*, existing §§ 250.732(d)(5), 250.732(d)(8), 250.732(d)(9), 250.732(d)(11), and 250.732(d)(13)).

- **Response:** BSEE disagrees with the suggested changes. The MIA report content is not only redundant of § 250.731, but also of other independent third-party reviews, certifications, and verifications required in §§ 250.734, 250.738, and 250.739, as well as personnel operational requirements in existing § 250.710, *What instructions must be given to personnel engaged in well operations?* among others. It is not necessary to retain the identified elements of the MIA report.

What are the requirements for a surface BOP stack? (§ 250.733)

This section of the existing regulations describes the capability, type, and number of BOPs required when an operator uses a surface BOP stack for drilling or for conducting operations. This section also describes the requirements for the risers and BOP stack when a surface BOP is used on a floating production facility.

Summary of proposed revisions:

BSEE proposed to revise paragraph (a)(1) by removing the reference to an extended time for compliance with exterior control line shearing requirements under the 2016 WCR, which has elapsed and no longer warrants reference in the regulations. BSEE also proposed to remove the requirement to have an alternative cutting device used for shearing electric-, wire-, or slick-line if your blind shear rams are unable to cut and seal under maximum anticipated surface pressure (MASP).

BSEE also proposed to revise paragraph (b)(1) by extending the compliance date from April 29, 2019, to April 29, 2021, to correspond with the same requirements for subsea BOP stacks. This revision would align the dual shear ram requirements for surface BOPs installed on floating facilities and subsea BOPs. Aligning these dates will reduce confusion between the different effective dates of the similar requirements for surface BOPs used on floating facilities and subsea BOPs.

BSEE proposed to add new paragraph (e) to clarify the minimum requirements of a surface BOP system for well-completion, workover, and decommissioning operations where estimated well pressures are low. The provisions in this proposed paragraph were inadvertently removed from the regulations through the 2016 WCR, and are consolidated from §§ 250.516, 250.616, and 250.1706 of the regulations as they existed before the 2016 WCR. BSEE proposed minor revisions to the original language to conform to the applicable operations covered under revised Subpart G and to update cross-referenced citations.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and includes in the final rule most of the proposed language without change, except for the following revisions. BSEE is revising paragraph (a)(1) by adding: "Prior to April 29, 2021, if your blind shear rams are unable to cut any electric-, wire-, or slick-line under MASP as defined for the operation and seal the wellbore, you must use an alternative cutting device capable of shearing the lines before closing the BOP. This device must be available on the rig floor during operations that require their use." BSEE is retaining the alternative cutting device requirements, similar to those found in existing regulations, based on comments. As many commenters stated, BSEE is aware that not all OEMs currently offer wireline cutting capability for all BOP sizes and rated working pressures. This addition is necessary to ensure that a device capable of cutting wire is available to help ensure sealing efficiency. BSEE is limiting this requirement to the window prior to April 29, 2021, because, after that point, shear rams must be capable of shearing wire. Since the publication of the proposed rule, BSEE has discussed these shearing requirements with relevant OEMs and has determined that the technology currently exists, but is not yet available for commercial off-the-shelf use.

BSEE is also revising paragraph (b)(1) to clarify that, after April 29, 2021, operators must follow the BOP requirements in § 250.734(a)(1) for new floating production facilities installed with a surface BOP. These revisions are based on comments seeking clarity. Since the publication of the 2016 WCR, including in the comments for this rulemaking, stakeholders have expressed confusion about the requirements in this section that reference § 250.734 regarding dual shear rams, which do not take effect until 2021. BSEE is making the compliance date of April 29, 2021 the same for §§ 250.733(b)(1) and 250.734(a)(1) to avoid confusion. This will apply only to new floating production facilities with a surface BOP, and the expected number of those types of facilities is minimal. The intent of the proposed rule was for the requirements to apply to new facilities installed after 2021. These regulations do not apply to existing facilities, even if they are redeployed at another location because of several issues, including, but not limited to, clearance and weight issues.

BSEE is revising proposed paragraph (e)(4) to clarify that the drill string should include the drill pipe, work string, or tubing, depending on the operation. Based on BSEE’s review of the proposed rule and submitted comments, this clarification will help ensure the set of pipe rams can seal around drill pipe, work string, or tubing. When conducting well completions, workover, and decommissioning operations, there are many types of equipment that are run in the hole through the BOP. This requirement reflects longstanding and current BSEE practice. This revision does not change or affect an operator’s burden, as it is currently reflected in operational practice and does not add new equipment required for shear testing. The revision simply clarifies current, longstanding BSEE practice.

Summary of Comments:

Comments related to proposed § 250.733– Compliance dates

Summary of comments: A commenter suggests that it would be preferable to apply the April 2019 deadline for surface BOPs to both subsea and surface BOPs.

- **Response:** BSEE disagrees that the compliance dates for subsea BOP dual shear ram requirements should be 2019, because there would not be sufficient time to install and implement the required equipment modifications. BSEE understands that there is potential confusion about the compliance date applicable to this section's reference to the dual shear ram requirements of § 250.734, because those requirements do not take effect until 2021. Therefore, BSEE is making the compliance dates of April 29, 2021 the same for §§ 250.733(b)(1) and 250.734(a)(1) to avoid confusion. This requirement only applies to newly installed floating production facilities that use a surface BOP.

Comments related to proposed § 250.733(e) – 5K systems

Summary of comments: A commenter asserted that there are differences and confusion between the regulations pertaining to 5,000 psi (5K) systems and API Standard 53. The commenter recommended that BSEE align those regulations with API Standard 53 to avoid confusion.

- **Response:** BSEE agrees that there are differences between the regulations and API Standard 53; furthermore, BSEE does not agree with using the API Standard 53 options for stack arrangements for 5K systems. Paragraph (e) applies to well-completion, workover, and decommissioning operations.

Comments related to proposed § 250.733(b)(1) – Floating facilities

Summary of comments: Multiple commenters assert that paragraph (b)(1) is applicable only to new floating production facilities.

- **Response:** BSEE agrees with the commenters and has revised proposed paragraph (b)(1) to clarify its applicability only to new floating production facilities installed after April 29, 2021, that use a surface BOP.

Comments related to proposed § 250.733(a)(1) – Alternative cutting device

Summary of comments: Multiple commenters oppose removing the alternative cutting device requirement, as there are no qualified OEM blind shear rams for certain BOPs. Commenters assert that the alternative cutting device is considered necessary to meet the requirement and considered part of the BOP system; therefore, BSEE must allow the alternative cutting device. A commenter also suggested that BSEE should allow the use of the alternative cutting device prior to April 29, 2021, and, after this date, require that the shearing rams be capable of shearing the wire.

- **Response:** BSEE agrees with the commenters and has added back in the provisions related to the alternative cutting device to paragraph (a)(1). BSEE is aware that not all OEMs currently offer wireline cutting capability for all BOP sizes and rated working pressures. As encouraged by Congress[31] to ensure that offshore operations promote safety and protect the environment in a technically feasible manner, this addition is necessary to ensure that a device capable of cutting wire is available to ensure sealing efficiency. Consistent with an option discussed in the proposed rule to extend the compliance date, BSEE is limiting the timeframe for allowing the alternative cutting device. The cutting device may only be used until April 29, 2021, after which the shear rams must be capable of shearing wire.

[31] See n. 10, supra.

Comments related to proposed §§ 250.733 and 250.734 – Dual blind shear rams

Summary of comments: Multiple commenters recommended that BSEE require dual blind shear rams. The commenters assert that blind shear rams provide an extra layer of safety because they are designed to be capable of sealing and shearing the drill pipe during active drilling.

- **Response:** BSEE disagrees with the recommendation to require dual blind shear rams. Other shearing rams have other shearing utility besides shearing the listed components in §§ 250.733 and 250.734 (*e.g.*, the casing shear ram is still necessary to shear casing, which the BSR cannot shear). The current regulations provide the operators flexibility for how they utilize the BOP system and components for operations, while still requiring all critical shearing capabilities. This final rule does not change the requirement for operators to utilize dual shear rams by 2021, and does not require both shear rams to seal.

What are the requirements for a subsea BOP system? (§ 250.734)

This section of the existing regulations identifies the requirements of a subsea BOP system used for drilling or to conduct operations. The section describes the requirements for subsea BOP system capabilities, as well as the functionality, type, and quantity of required equipment (*e.g.*, BOPs, pod control systems, accumulator capacity, ROVs, autoshear and deadman, acoustic control system, and management and operating protocols). This section also describes the actions that an operator must take if it suspends operations to repair the subsea BOP system.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraph (a)(1)(ii) by providing that a "combination of the" shear rams must be capable of shearing all the items specified in the paragraph. This revision would have aligned the functionality of the BOP system with API Standard 53 and proposed

§ 250.730(a). BSEE explained that certain casing shears still have difficulty shearing electric-, wire-, or slick-line, while certain blind shear rams have difficulties shearing larger casing sizes. This proposed revision would have provided the operators flexibility in designing the BOP system and components for operations while still ensuring all critical shearing capabilities. BSEE further proposed to revise paragraph (a)(1)(ii) by removing references to the extended compliance dates for certain shearing requirements under the 2016 WCR, which have passed and no longer warrant reference in the regulations.

BSEE proposed to revise the accumulator requirements in paragraph (a)(3) to better align with API Standard 53. BSEE also proposed to remove the reference to the subsea location of the accumulator capacity. BSEE understands that the accumulator system works together with the surface and subsea accumulator capacity to achieve full functionality, and BSEE proposed that it would be unnecessary for this provision to identify only subsea requirements when the entire system is covered under API Standard 53.

BSEE proposed to revise paragraph (a)(3)(i) by clarifying that the accumulator capacity must be sufficient to close each required shear ram, ram locks, and one pipe ram and to disconnect the LMRP. During a well control event, the most critical functions would be to close the BOP components and seal the well.

BSEE proposed to revise paragraph (a)(3)(ii) to clarify that the accumulator capacity must have the capability to perform the ROV functions within the required times specified in API Standard 53 using the ROVs or flying leads. These revisions were proposed to better align this section with API Standard 53, and to account for technological advancements in ROV capabilities to meet the appropriate BOP closing times.

BSEE proposed to revise paragraph (a)(3)(iii) by removing the word "dedicated" before bottles, thus allowing bottles to be shared among emergency and secondary control system functions to secure the wellbore. This revision would further align the accumulator capacity requirements with API Standard 53, account for the appropriate number of accumulator bottles on the subsea BOP stack, help ensure that the regulatory requirements do not exceed the operational or mechanical design limits of the wellhead and BOP systems, and help minimize risks associated with approaching those design limits.

BSEE also proposed to revise paragraph (a)(4) by removing the word "opening" and adding references to the ROV function response times contained in API Standard 53. After publication of the 2016 WCR, the API Standard 53 committee clarified that standard's definition of "operate," with respect to critical functions, included only the "close" function and not the "open" function. Removal of the ROV "open" function could limit the ability for well intervention after the well has already been secured. However, it would not affect or decrease the ROV's ability to close the required components for well control purposes. During a well control event, the most critical functions would be to close the BOP components and seal the well.

BSEE also proposed to revise paragraph (a)(4) by requiring the ROV to function the appropriate BOP component within the required response time contained in API Standard 53. BSEE proposed to revise this paragraph not only to better align it with API Standard 53, but also to account for recent technological advancements in ROV capabilities to meet the appropriate BOP closing times. BSEE is aware that operators currently use high flow rate ROVs to meet the BOP component closing times of API Standard 53.

BSEE proposed to incorporate the latest edition (*i.e.*, the 2nd edition) of API RP 17H in proposed paragraph (a)(4). BSEE explained that there is a conflict between the ANSI/API RP 17H 1st edition, as incorporated by reference in the 2016 WCR, and the API Standard 53 ROV requirements. The 2nd edition of API RP 17H eliminates the conflict with API Standard 53. By incorporating by reference the 2nd edition of API RP 17H, BSEE would ensure that the appropriate methods are utilized to comply with the API Standard 53 ROV closure timeframe of 45 seconds.

BSEE proposed to revise paragraph (a)(6)(iv) by clarifying that the autoshear/deadman functions must be able to close, at a minimum, two shear rams in sequence, but do not need to operate every emergency function. Closing two shear rams in sequence may not be advantageous for certain Emergency Disconnect Sequence (EDS) functions, as discussed in the proposed rule (83 FR 22140).

BSEE proposed to revise paragraph (a)(16) by removing references to the centering mechanism and the ability to mitigate compression of the pipe between the shear rams in paragraphs (a)(16)(i) and (ii), respectively. Many of the shear ram designs have improved the shearing capabilities to help ensure the shearing is conducted on the appropriate shearing area of the shear blades.

BSEE proposed to revise paragraph (b)(1) by replacing the BAVO references with references to an independent third party.

BSEE also proposed to revise paragraph (b)(2), redesignate existing paragraph (b)(3) as (b)(4), and add new paragraph (b)(3) in order to include provisions for testing the applicable BOP or LMRP upon relatch of the BOP or LMRP to the well. BSEE proposed these revisions to codify longstanding BSEE policy and to clarify testing requirements when an operator has returned to the well location and relatched the BOP or LMRP to the well. These tests would help confirm that the BOP or LMRP is properly functional prior to resuming operations after the BOP or LMRP is removed.

<u>Summary of final rule revisions:</u>

BSEE received and considered comments on the proposed revisions and includes most of the proposed language in the final rule without change, except for the following revisions.

BSEE is not finalizing the proposed revisions to paragraph (a)(1)(ii) and is keeping many of the existing requirements, except for the references to the now-past compliance date from the 2016 WCR. This change from the proposed rule is based on BSEE's consideration of comments received and on BSEE's understanding concerning the importance of shearing redundancy. It is also based on BSEE's recognition that the proposed language would have permitted reliance on a "combination" of shear rams, which would have created some potential ambiguity regarding the number of rams subject to this shearing requirement.

BSEE revised final paragraph (a)(3)(iii) by removing the extended compliance date and clarifying that the accumulator bottles for autoshear and deadman must be located subsea. Based on comments received, BSEE is removing the existing compliance date of April 29, 2021, for this provision because an extension of time is no longer necessary due to the current operational abilities of the accumulator systems. The autoshear/deadman systems are functions not controlled by surface personnel and are essentially considered failsafe. The bottles need to be located subsea to ensure there is enough fluid and pressure to operate the associated respective functions. BSEE revised final paragraph (a)(4) by clarifying that the operator must have the ROV intervention capability to close the identified BOP components. This revision is based on comments received and will help ensure that the BOP components can be properly functioned, if necessary, through the use of an ROV hot stab. BSEE emphasizes that the response times are a critical function of the ROV capabilities; BSEE does not want to limit the options available to function the required BOP components. The use of flying leads, a Subsea Accumulator Module (SAM) unit, or a high flow ROV can all meet the required component closing time. This revision is consistent with a BSEE Q and A posted on BSEE's website at https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule.

BSEE also revised paragraph (a)(6)(iv) by adding "and an EDS mode" after "functions." This revision is based on BSEE's consideration of comments and is intended to clarify that an EDS mode must be able to shear in an emergency situation. This is also consistent with guidance provided in the BSEE Q and As posted on BSEE's website at https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule.

Based on consideration of comments, BSEE is revising paragraph (a)(6)(v) to retain a modified version of the existing requirement that the sequencing must allow a sufficient delay when closing two shear rams in order to provide maximum sealing efficiency. Due to the various BOP configurations across industry, BSEE wants to provide clarity about how the BOP systems should function properly to achieve necessary shearing and sealing during a well control event.

Based on consideration of comments received, BSEE is revising paragraph (a)(16)(i) to preserve a modified version of the existing requirement for operators to have the capability to position the entire pipe completely within the area of the shearing blade. This capability cannot be another ram BOP or annular preventer, but these may be used during a planned shear. BSEE recognizes that the technology exists to help ensure the pipe is positioned within the shear surface to optimize shearing capabilities. BSEE agrees with some commenters that, even though this technology exists, the proposed rule's wholesale removal of the positioning requirement did not specifically require the use of such technology. BSEE is restoring the requirement to have the capability to position the pipe within the shearing blade; however, BSEE does not require this to be achieved with a separate mechanism and allows use of the shear ram. As encouraged by Congress[32] to ensure that offshore operations promote safety and protect the environment in a technically feasible manner, BSEE does not want to limit the use of improved technological advancements in shear blade designs. BSEE retained the compliance date of May 1, 2023, associated with the original centering mechanism requirement.

BSEE is also revising paragraph (b)(1) to require operators to submit a revised permit with a written statement from an independent third party documenting the BOP system repairs and certifying that the previous certification, required in § 250.731(c), remains valid. This revision is necessary for consistency with similar requirements and revisions based on BSEE's consideration of comments received on proposed § 250.720. This revision will provide BSEE with additional assurance that the related equipment is fit for service upon relatch of the BOP to the well, and will reflect current BSEE practice. The type of information required within this new submittal is similar to the type of information operators submit with their original required BSEE permits. This revision helps provide assurance that there is a current certification of the BOP and provides consistent documentation of recertification. BSEE includes the proposed language for paragraphs (b)(2) and (3) in the final rule without change.

<u>Summary of Comments:</u>

Comments related to proposed § 250.734 – (Dual Shear Rams)

Summary of comments: Numerous commenters opposed the proposed elimination of the

[32] See n. 10, supra.

existing requirement that both shear rams be capable of shearing certain equipment in the hole and the proposal to replace that requirement with a requirement that a combination of shear rams be capable of shearing the equipment. The commenters asserted that this proposed change would weaken the regulations and negatively impact safety because it would not provide for a fully redundant shear ram as a backup. The commenters also asserted that the proposed revision would not account for situations in which one of the shear rams malfunctions. One of these commenters requested an explanation from BSEE as to why requiring only one shear ram to seal under MASP is acceptable. Another commenter suggested that the regulations should prescribe a minimum design basis capability for shear rams, along with a clear date for compliance.

- **Response:** BSEE agrees with the comments about the utility of redundant shear rams and is revising the proposed requirement in § 250.734(a)(1)(ii) that a "combination of the shear rams must be capable of…" to preserve in the final rule the existing requirement that "[b]oth shear rams must be capable of…." This revision will keep that portion of paragraph (a)(1)(ii) as it is in the existing regulations. BSEE's analysis is set forth in further detail above at Section III.B.3. BSEE may consider possible revisions to this provision in future rulemakings.

Comments related to proposed § 250.734(a)(3)(iii) – Compliance date for shared accumulator bottles

Summary of comments: A commenter questioned whether the reference to the April 29, 2021, date is necessary if there is no longer a requirement to have dedicated bottles in the accumulator system.

- **Response:** BSEE agrees with the commenter and removed the reference to the compliance date of April 29, 2021 from final § 250.734(a)(3)(iii). BSEE is removing the compliance date because no extension of time is necessary due to the current operational capabilities of the accumulator systems.

Comments related to proposed § 250.734(a)(6)(v) – Shearing risk assessment

Summary of comments: A commenter suggested that a risk assessment should be performed to ensure the fish of the sheared tubular is clear of the blind ram while it is trying to close. For example, the commenter asserted, if the drill pipe was in compression and the sequence was casing shear ram (CSR) then BSR, the BSR would not be closing on an open hole due to fact that it must be located above the CSR. The commenter also requested clarification that, for emergency functions, no additional steps can be taken (such as lifting the drill pipe, hanging off on pipe rams, etc.).

- **Response:** BSEE does not agree with the suggestion that a risk assessment should be required for shearing procedures. However, an operator may use a risk assessment to help identify the actions by personnel required in the well control plan in accordance with § 250.710, *What instructions must be given to personnel engaged in well operations?* The regulations also require that the well control plan contain specific procedures regarding how operators would seal the wellbore and shear pipe, including what to do when non-shearables are located across a BSR.

Summary of comments: A commenter suggested adding a requirement that a single shear ram, or a combination of shear rams, must be capable of performing the shearing tasks.

- **Response:** BSEE does not agree with the suggested revision. BSEE is keeping the existing provision in § 250.734(a)(1)(ii) that requires both shear rams to be capable of shearing the specified components. The suggested revisions would not support a fully redundant shear ram in the event one shear ram is unable to function. BSEE may evaluate revisions to this provision in future rulemakings.

Comments related to proposed § 250.734 – Centering Pipe while Shearing

Summary of comments: Several commenters supported removing the requirement to have a centering mechanism to center the drill pipe prior to shearing. Those same commenters, however, disagreed with the need for prescriptive design requirements for the shear ram, since those requirements are already adequately addressed in ANSI/API Spec. 16A 4th Edition – *Specification for Drill-through Equipment*.

- **Response:** BSEE disagrees in part and agrees in part. BSEE is retaining the requirement that operators have the capability to position the pipe within the shearing blade; however, BSEE does not require this to be achieved with a separate mechanism and will allow this capability to be established with the shear ram. BSEE recognizes that the technology exists to help ensure the pipe is positioned within the shear surface to optimize shearing capabilities. The proposed rule, however, did not specifically require the use of such centering technology. As encouraged by Congress[33] to ensure that offshore operations promote safety and protect the environment in a technically feasible manner, BSEE agrees with the importance of such capabilities, but does not want to limit the use of improved technological advancements in shear blade designs. For further analysis, see Section III.B.2. BSEE currently incorporates ANSI/API Spec. 16A, Third edition in § 250.198.

Summary of comments: Numerous commenters disagree with eliminating the requirement for a drill pipe centering mechanism. These commenters cite numerous reasons for why they

[33] See n. 10, supra.

disagree, including that the need for a centering mechanism was a lesson learned from the *Deepwater Horizon* investigation, and that the existing shear rams that do not use newer technology would not be able to center the drill pipe. One of these commenters suggests that using the newer shearing blades that can center a pipe should be a baseline requirement, and that a specific timeframe for compliance should be established. The commenters also question whether the agency has sufficient experience with implementing the centering mechanism requirement of the 2016 WCR, because that requirement is not currently in effect. One commenter agrees that a centering mechanism is not necessary, but asserts that there should be a requirement for the capability to shear the tubular in any position in the wellbore.

- **Response:** BSEE agrees with the comments about the importance of requiring pipe centering capabilities, and is retaining the requirement that operators have the capability to position the pipe within the shearing blade. However, BSEE will not find it necessary for this to be achieved with a separate mechanism and will allow this capability to be established with the shear ram (*e.g.*, shear ram blade design). BSEE recognizes the technology exists to help ensure the pipe is positioned within the shear surface to optimize shearing capabilities. The proposed rule, however, did not specifically require the use of such centering technology. As encouraged by Congress[34] to ensure that offshore operations promote safety and protect the environment in a technically feasible manner, BSEE agrees with the importance of such capabilities, but does not want to limit the use of improved technological advancements in shear blade designs. For further analysis, see Section III.B.2.

[34] See n. 10, supra.

Comments related to proposed § 250.734 – Emergency Functions – EDS, Autoshear/Deadman

Summary of comments: One commenter asserts that the justification for eliminating the requirement for the Emergency Disconnect Sequence (EDS) system to be capable of closing two shear rams in sequence is inadequate because the proposed revisions would not sufficiently address how shear ram closure will be assured when an EDS occurs.

- **Response**: BSEE has revised paragraph (a)(6)(iv) by adding "and an EDS mode" after "functions" to provide clarity about how the BOP systems should function properly to achieve necessary shearing and sealing. This revision is based on BSEE's consideration of comments and is intended to clarify that an EDS mode must be able to shear in an emergency situation. BSEE wants to ensure optimal shearing and sealing functionality during a well control event. Depending on the rig operations, operators develop different EDS modes that would function different BOP components at appropriate times. The selection of the EDS mode and the specific sequencing of emergency functions should be developed by the operator based on safety considerations and an operational risk assessment. The EDS mode is a separate type of emergency function from the autoshear/deadman. EDS is a function that is manually initiated and operated by rig personnel and involves a controlled disconnect.

Summary of comments: Multiple commenters support the requirement that the autoshear/deadman systems close, at a minimum, two shear rams in sequence. A commenter proposed to add that: the sequence should allow a sufficient delay to complete the shearing function before sealing and that a risk assessment should be performed to ensure no conditions exist where the sealing rams would be expected to shear after the non-sealing ram shears, and no additional procedures, such as lifting the drill pipe, can be performed for emergency systems.

- **Response:** BSEE has revised paragraph (a)(6)(v) to retain a modified version of the existing requirement that the sequencing must allow a sufficient delay when closing two shear rams in order to provide maximum sealing efficiency. Due to the various BOP configurations across industry, BSEE wants to provide clarity about how the BOP systems should function properly to achieve necessary shearing and sealing during a well control event. BSEE wants to ensure optimal shearing and sealing functionality during a well control event. Depending upon the rig operations, operators develop different EDS modes that would function different BOP components at appropriate times. The selection of the EDS mode and the specific sequencing of emergency functions should be developed by the operator based on safety considerations and an operational risk assessment. The EDS mode is a separate type of emergency function from the autoshear/deadman. EDS is a function that is manually initiated and operated by rig personnel and involves a controlled disconnect. Operators may use a risk assessment to help identify the actions required of personnel in the well control plan in accordance with § 250.710. The well control plan contains specific procedures about how operators would seal the wellbore and shear pipe, including what to do when non-shearables are located across a BSR.

Comments related to proposed § 250.734 – Pipe Compression

Summary of comments: Several commenters identified a potential pipe compression issue when functioning the shear rams. Commenters asserted that pipe compression could compromise the proper functioning of the BOP, and a commenter adds that a better understanding of dynamic fluid conditions inside the BOP is needed in order to improve shearing and sealing capabilities. Another commenter asserted that drill pipe compression along with a sequence of casing shear ram then blind shear ram would preclude the blind shear ram from closing on an open hole, and that operators must have the ability to mitigate compression of the pipe stub between the shearing rams when both shear rams are closed. The commenters question whether there have been sufficient technological advances in BOP and shear ram design in the two years since the adoption of the 2016 WCR, and the validity of the assumption that there will be industry-wide adoption of the new technologies if they exist.

- **Response:** As a general matter, BSEE agrees that understanding the dynamic fluid condition inside the BOP is an important research area. BSEE is requiring in § 250.734(a)(16)(i) of the final rule the capability to position the pipe within the shearing blade, which will help mitigate the concerns about the ability to shear pipe due to compression. BSEE recognizes that the technology exists to help ensure the pipe is positioned within the shear surface to optimize shearing capabilities. BSEE is retaining the requirement to utilize such technology, but allowing for different technologies to meet this requirement.

Comments related to proposed § 250.734 – Retesting Deadman

Summary of comments: Multiple commenters disagreed with the requirement to retest the deadman system when the system has not been repaired or affected by a suspension of operations. The commenters asserted that retesting the deadman subsea after a successful surface certification is not necessary every time the BOP or LMRP is latched to the wellhead, and that the previous test is sufficient to demonstrate the system's proper functioning when the system has not been modified. The commenters assert that testing the deadman system in such situations presents unnecessary risks.

- **Response:** BSEE disagrees. When the functional system is disconnected, it is important to ensure that the emergency systems are completely functional upon reconnection of that system. BSEE has determined that this requires retesting upon relatch.

Summary of comments: One commenter is concerned with allowing operators to conduct the deadman test at a low psi, so long as operators end the test with an acceptable psi, because allowing such a test procedure would place a significant amount of trust in industry self-regulation.

- **Response:** BSEE is allowing the use of a 1000 psi test for the initial deadman test to verify functionality of the system. BSEE will still require operators to fully pressure test the components used within the deadman system according to § 250.737(d)(4). BSEE will oversee and enforce compliance with these testing requirements and will not rely on industry self-regulation.

Comments related to proposed § 250.734(a)(4) – ROV Intervention

Summary of comments: Numerous commenters supported removing the open function requirement from the ROV panel. However, the commenters also requested clarity regarding whether the timing requirements could be met by using only an ROV or by using a flying lead. These commenters suggested aligning the timing requirements with those in API Standard 53 and prior references in the rule with respect to ROV capability.

- **Response**: BSEE is revising this section to clarify that operators must have the capability to perform the required function in the response times outlined in API Standard 53. This can be accomplished with a flying lead or SAM unit, or the ROV. This clarification is based on a BSEE Q and A related to the 2016 WCR. BSEE agrees that the response times are the critical function of the ROV capabilities. BSEE has not mandated a high capacity ROV, but rather that the ROV hot stabs would accept the high flow via flying leads.

Summary of comments: Some commenters expressed concern about the reference to compliance with API RP 17H 2nd Edition, since API Standard 53 already covers the same requirement and the relevant receptacles are not materially different from those addressed in ANSI/API RP 17H 1st Edition.

- **Response:** BSEE disagrees with the assertion that BSEE should only reference API Standard 53. API Standard 53 does not contain all of the same information or the same level of specificity covered under API RP 17H.

Summary of comments: One commenter opposed removing the requirement that ROVs be capable of opening each shear ram, ram lock, or pipe ram, since the ability to temporarily open the ram or lock may be necessary for well control intervention. The commenter also disagreed with relying on API Standard 53 because industry standards can be weakened, whereas standards established by the agency and set in regulations can be more stringent.

- **Response:** As more thoroughly described in the preamble to the proposed rule, the most critical ROV functions would be to close the BOP components and seal the well for well control purposes. This regulatory revision does not limit the operator's ability to include the open function on the ROV panel. With respect to the comments regarding reliance on industry standards, BSEE incorporates a specific edition of a standard; when a standard is updated by the standards organization, BSEE evaluates the updated edition and would only incorporate the updated edition as appropriate. In other words, BSEE only incorporates into its regulations (through public rulemaking) those standards that it has determined to be adequate and appropriate, and the regulatory force and content of those incorporated standards can only be altered through subsequent rulemaking. BSEE also utilizes industry standards to establish foundational requirements which it can supplement.

Comments related to proposed § 250.734 – Accumulator Systems and capacity

Summary of comments: A commenter supported BSEE's proposed revisions to allow sharing of bottles among emergency and secondary control system functions to secure a wellbore. The commenter recommended that BSEE reference the API Spec. 16D, *Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment*, Second Edition, incorporated by reference in § 250.198 related to controls systems, and clarify whether sharing bottles would be a sufficiently redundant system to allow for emergency use.

- **Response:** BSEE agrees with the commenter generally about the use of API Spec. 16D related to control systems; however, BSEE disagrees that a reference to API Spec. 16D is necessary in this section. BSEE already incorporates API Spec. 16D and API Standard 53, and requires sufficient accumulator volume for the emergency operations. The accumulator requirements are covered under § 250.735.

Summary of comments: A commenter asserted that BSEE's proposed revisions to the accumulator requirements in § 250.734(a)(3) would reduce safety and severely weaken the ability of the subsea BOP system to function in the event of a lost connection to the surface rig. The commenter further asserted that BSEE does not explain how removing the reference to the subsea location of accumulator capacity would ensure that the accumulator system could adequately function if there is a loss of the power fluid connection to the surface, and that BSEE therefore must continue to require that the necessary accumulator capacity be located subsea.

The commenter recommended that BSEE should retain the requirement in § 250.734(a)(3)(iii) for dedicated bottles.

- **Response:** BSEE agrees with the commenter and has revised the language in final § 250.734(a)(3)(iii) to clarify that the accumulator capacity for autoshear/deadman must be located subsea. The autoshear/deadman systems are considered failsafe systems that function automatically in emergency situations and do not require surface personnel action to function. Consistent with the current requirements, the accumulator bottles that function those systems need to be located subsea to ensure there is enough fluid and pressure to operate the associated functions. This is a clarification to ensure there is no confusion about where the required fluid and pressure must reside to operate the autoshear/deadman emergency functions. Autoshear/deadman are separate triggers to operate the same equipment and would not be functioned together. Each emergency function has different criteria that must be met before it will automatically function.

Comments related to proposed § 250.734 – Accumulators and industry standards

Summary of comments: Multiple commenters asserted that BSEE should explain why allowing operators to simply use industry standards, which do not necessarily require accumulators, is justified.

- **Response:** BSEE disagrees with the commenters. BSEE incorporates industry standards, not all of which include accumulator specifications, into the regulations as required by the NTTAA. Before incorporating standards, BSEE thoroughly evaluates them for adequacy and appropriateness. BSEE also supplements those standards with its own regulatory requirements related to operations and equipment, as we do in the case of accumulators.

Comments related to proposed § 250.734 – Centering pipe while shearing

Summary of comments: A commenter asserted that this section refers to the use of "newer shearing blades" which can center pipe as justification for the removal of requirements to verify that testing is performed on the outermost edges of the shearing blades of the shear ram positioning mechanism. The commenter asserted that this assumes that these newer blades, which are not clearly defined, are used universally. Multiple commenters recommended that BSEE should clarify that the newer shearing blades that can center pipe are required and that BSEE should give a specific time frame for operators to comply.

- **Response:** BSEE generally agrees with the commenters and has retained (with modifications) provisions in § 250.734(a)(16)(i) that require operators to have the capability to position the entire pipe completely within the area of the shearing blade. This capability can be achieved by a separate mechanism or by ram design. As encouraged by Congress[35] to ensure that offshore operations promote safety and protect the environment in a technically feasible manner, BSEE agrees with the importance of positioning capabilities, but does not want to limit the technology that can be used to meet those requirements.

What associated systems and related equipment must all BOP systems include? (§ 250.735)

This section of the existing regulations details the associated systems and related equipment that all BOP systems must include. The required items include an accumulator system; an automatic backup to the primary accumulator-charging system; at least two full BOP control stations; choke, kill, and fill-up lines; and locking devices.

[35] See n. 10, supra.

Summary of proposed revisions:

BSEE proposed to revise paragraph (a) by clarifying that the accumulator system must have the fluid volume capacity and appropriate pre-charge pressures in accordance with API Standard 53. These proposed revisions would provide consistency with API Standard 53 and conform to the other proposed accumulator system revisions in § 250.734.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and includes the proposed language in the final rule without change.

Summary of Comments:

Comments related to § 250.735(g)(2)(i) – Remotely operated locking devices

Summary of comments: A commenter suggested that BSEE remove the requirements for remotely operated locking devices on surface BOP blind shear rams that are required by April 29, 2019. The commenter asserted that, while these types of devices are necessary by design for subsea BOPs, due to the inability to manually access the rams and engage locking devices, manual access is not an issue on surface BOPs and the manual locking devices that have been successfully utilized for decades are sufficient to allow securing of these surface rams when necessary. The commenter asserted that there are multiple surface BOP sizes and ratings that would require these modifications and expressed concerns about space issues to accommodate the modified locking systems, depending on the rig size and type being utilized.

- **Response:** BSEE did not propose or discuss changes to this provision in the proposed rule and as such would not be in a position to make the suggested changes in this final rule. Regardless, BSEE disagrees with the suggestion about removing the remotely locking device requirement for surface BOP blind shear rams. BSEE's position is that a manual lock would require rig personnel to enter a potentially hazardous area and that a remotely locking device would help limit personnel exposure to the potentially hazardous area, if a shearing event is necessary.

Summary of comments: A commenter requested clarification in paragraph (g)(2) that a pilot-operated check valve is considered a remotely operated locking device. The commenter suggested that the rule should be modified to read as follows: "(2) For surface BOPs: (i) Remotely operated locking devices (*i.e.*, pilot operated check valve) must be installed on blind shear rams no later than April 29, 2021...."

- **Response:** BSEE did not propose or discuss changes to this provision in the proposed rule, and as such would not be in a position to make the suggested changes in this final rule. Regardless, BSEE does not want to limit the types of devices (*e.g.*, pilot operated check valve) that can be used for locking. Operators should contact the appropriate BSEE District Manager if there are any questions about the specified use of this type of equipment.

What are the requirements for choke manifolds, kelly-type valves inside BOPs, and drill string safety valves? (§ 250.736)

This section of the existing regulations describes the requirements for the installation, use, and capability of choke manifolds, BOP systems, valves, pipes, and flexible hoses appropriate for the working pressure and temperature and operating conditions.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraph (d)(5) by including equipment requirements for the safety valve when running casing with a subsea BOP. This revision would specify that the safety valve must be available on the rig floor if the length of casing being run exceeds the water depth, which would result in the casing being across the BOP stack and the rig floor prior to crossing over to the drill pipe running string. This revision would provide clarity and consistency throughout BSEE permitting and minimize the number of alternate procedure or equipment requests submitted to BSEE.

Summary of final rule revisions:

BSEE received a few comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

What are the BOP system testing requirements? (§ 250.737)

This section of the existing regulations details the pressure test frequency, procedures, and duration for BOP systems. This section also contains additional testing requirements, including compliance with API Standard 53, using water to test a surface BOP system, stump testing a subsea BOP system, performing an initial subsea BOP test, alternating testing pods between control stations, as well as pressure and function tests of various components.

Summary of proposed revisions:

BSEE solicited comments in the proposed rule "on whether the BOP testing interval should be 7 days, 14 days, or 21 days for all types of operations including drilling, completions, workovers, and decommissioning," as well as "on the specific cost and operational implications of each testing interval."[36] BSEE proposed to revise paragraph (b) to clarify the BOP system pressure testing requirements. These proposed revisions included clarification that the test rams and non-sealing shear rams do not need to be pressure tested, because the non-sealing shear rams are not pressure holding components and the test ram is an inverted ram that is not utilized for well control purposes. BSEE also proposed to revise paragraph (b)(2) to reflect the current

[36] 83 FR 22143 (May 11, 2018).

BSEE policy for conducting the high-pressure test for specific components. For example, some of the proposed revisions included specific procedures and testing parameters for initial equipment pressure testing, as well as provisions for subsequent pressure testing on the same equipment.

In the proposed rule, BSEE proposed to revise paragraphs (d)(2)(ii) and (d)(3)(iii) by removing the requirement to submit test results to BSEE where BSEE is unable to witness testing. These proposed revisions would significantly reduce the number of submittals to BSEE and minimize the associated burden for BSEE to review those submittals. If BSEE is unable to witness the testing, BSEE may access the testing documentation upon request, in accordance with §§ 250.740, 250.741, and 250.746.

BSEE proposed to revise paragraph (d)(3)(iv) by removing "test and[.]" BSEE would remove this term to minimize confusion regarding verification and testing. In this instance, verification of closure qualifies as testing the ROV functions. The purpose of the stump test is to help ensure the BOP components and control systems can function properly before being utilized on a well.

BSEE proposed to revise paragraph (d)(3)(v) to clarify that pressure testing of each ram and annular on the stump test is only required once. This revision would help ensure that the testing of BOP components during stump testing would limit unnecessarily duplicative pressure testing of each ram or annular. It is unnecessary to pressure test a ram or annular multiple times during stump testing if that component has already been successfully pressure tested, verifying proper functionality.

BSEE proposed to revise paragraph (d)(4)(i) to clarify that the initial subsea BOP test on the seafloor would need to begin "within 30 days of the stump test." BSEE receives many questions about the timing of the initial subsea test and, as written, the regulation was ambiguous regarding exactly what needed to occur within the 30 days. BSEE proposed this revision to clarify that the testing must begin within 30 days of the stump test. BSEE wants to ensure that the time between the stump testing and the initial subsea test is minimal to help confirm that all of the BOP components can properly function upon installation on the well.

BSEE proposed to revise paragraph (d)(4)(iii) to include annulars in the pressure testing requirements of paragraphs (b) and (c) of this section. This proposed revision would not alter the current testing requirements for annulars and would provide clarity for where to find them.

BSEE proposed to revise paragraph (d)(4)(v) to clarify the initial subsea pressure testing requirements to confirm closure of the selected ram through an ROV hot stab. This revision would require the operator to confirm closure through a 1,000 psi pressure test held for 5 minutes. This proposed revision would codify BSEE policy for pressure testing the selected ram through the ROV hot stabs. BSEE has concluded that testing to higher pressures is not necessary for this circumstance because the intended purpose of this test is to verify operability of the ROV hot stab to close the selected ram. Selected rams must be pressure tested according to other regularly required pressure testing intervals and prior to commencing well operations.

BSEE proposed to remove existing paragraph (d)(4)(vi) because the testing requirements of the selected ram would now be covered under proposed paragraph (d)(4)(v).

BSEE also proposed to revise paragraph (d)(5) by clarifying the alternating testing schedules of control stations and pods. These proposed revisions help ensure that operators develop a testing schedule that provides for alternating testing between the control stations, and also between the pods for subsea BOPs. The intended result of alternating the testing is to ensure that each control station, and each pod for subsea, can properly function all required BOP components. BSEE proposed to revise paragraph (d)(12)(iv) by clarifying that, during the deadman test on the seafloor, operators are not required to indicate the discharge pressure of the subsea accumulator throughout the entire test. These revisions would require that the remaining pressure be documented at the end of the test, to help verify the proper accumulator settings required to function the specific critical BOP components.

BSEE proposed to revise paragraph (d)(12)(vi) to clarify the pressure testing requirements of the 2016 WCR, and to confirm closure of the BSR(s) during the autoshear/deadman and EDS testing. This proposed revision would require confirmation of closure through a 1,000 psi pressure test held for 5 minutes. Testing to higher pressures is not necessary for this circumstance because the BSR(s) will be pressure tested according to other regularly required pressure testing intervals and prior to commencing well operations.

BSEE proposed to add paragraph (d)(13) setting forth exceptions from the requirements for pressure testing the choke and kill side outlet valves. This proposed addition would codify BSEE policy and provide consistency for permitting throughout the Regions and Districts without meaningfully reducing safety or environmental protection.

<u>Summary of final rule revisions:</u>

BSEE received and considered comments on the proposed revisions and includes most of the proposed language in the final rule without change, except for the following revisions. Based on comments received, BSEE is redesignating existing paragraph (a)(4) as (a)(5) and adding new paragraph (a)(4) to allow the use of a 21-day BOP pressure testing frequency, in lieu of meeting the schedule established in paragraph (a)(2), if certain criteria are met and BSEE approves an operator’s 21-day BOP testing frequency request. BSEE is requiring operators to demonstrate, in the 21-day BOP testing frequency request, that they have developed a BOP health monitoring plan that includes certain system capabilities. BSEE is requiring the BOP health monitoring plan to include condition monitoring tools that are able to provide continuous surveillance of sensor readings from the BOP control system, real-time condition analysis and displays, functional pressure signal analysis, and historical sensor data. The plan also must include failure propagation analysis and a failure tracking and resolution system to identify recurring problems. BSEE is also requiring the operators to submit quarterly reports of the data collected to the BSEE Regional Supervisor, District Field Operations.

BSEE is revising paragraph (b)(3) by adding "or APM" after APD. This addition is based on BSEE's further analysis of the proposed rule and provides clarification. This revision codifies longstanding BSEE practice of identifying the applicable operational permit that is used for specific types of operations.

Based on comments received, BSEE is revising paragraph (c) to clarify that the use of a digital recorder is an acceptable method for documenting the duration of pressure tests. This revision is only a minor clarification. BSEE already allows the use of a digital recorder on subsea BOP tests and this revision codifies current practice.

BSEE is revising paragraph (d)(10) to address the 21-day BOP pressure testing option in new paragraph (a)(4). If BSEE approves an operator's request to use a 21-day BOP test frequency in accordance with paragraph (a)(4), then BSEE will allow the operator to function test its shear ram(s) BOPs every 21 days in accordance with the terms of that approval.

BSEE is also making minor corresponding revisions to paragraph (d)(13)(i) to remove the reference to the 14-day BOP testing and to clarify that the specified procedure applies to BOP testing, irrespective of the BOP testing frequency.

<u>Summary of Comments:</u>

Comments related to § 250.737(a)(2) – 21-day BOP testing frequency

Summary of comments: BSEE received multiple comments supporting and opposing any changes to the BOP testing frequency, as discussed in sections III and IV of this preamble. However, a commenter recommended that BSEE allow a 21-day testing frequency if additional requirements were put in place to help provide assurances of BOP functionality, equivalent performance, and operational risk as under a 14-day BOP testing frequency. The commenter recommended that BSEE require condition monitoring tools, failure propagation analysis, and a failure tracking and resolution system. In addition, the commenter suggested that if BSEE allowed a 21-day BOP testing frequency, it should require the operator to collect lifecycle data related to the reliability of performance of functioned components, determine whether there is a relationship between usage and deterioration, and understand the impact of testing frequency on reliability. In addition, a commenter asserted that the proposed rule did not identify to which technologies BSEE was referring with regard to possible revisions to BOP system testing requirements, or under what circumstances or based on what information BSEE might amend or restructure § 250.737.

- **Response:** BSEE agrees with the commenter's recommendations about allowing a 21-day BOP testing frequency if there are additional requirements to help provide assurance of equivalent performance and operational risk when compared to a 14-day BOP testing frequency. In the final rule, BSEE is allowing the use of a 21-day BOP testing frequency. However, before an operator can use this option, it must submit a request to BSEE for approval to use a 21-day BOP testing frequency. In the 21-day BOP testing frequency request, BSEE is requiring the operator to develop a BOP health monitoring plan that includes the use of condition monitoring tools capable of providing continuous surveillance of sensor readings from the BOP control system, real-time condition analysis and displays, functional pressure signal analysis, and trending capabilities of the sensor data. The plan must include failure propagation analysis and a failure tracking and resolution system to identify recurring problems. BSEE is also requiring operators to submit quarterly reports of the data collected to the BSEE Regional Supervisor, District Field Operations. BSEE will review this data to help ensure compliance with the requirements of the regulations and help evaluate the effectiveness and appropriateness of the 21-day testing frequency. BSEE disagrees with the assertion that it did not identify clearly enough the types of actions it was considering. The proposed rule solicited comments on a number of issues related to this topic, along with context for the solicitation (*see* 83 FR 22143) and BSEE's final rule is based on its analysis of the input received in response to that solicitation and other elements of the record. Further analysis of BSEE's action on this issue is found at Sections III.B.5 and IV.C of this preamble.

Comments related to proposed § 250.737(b) – BOP testing validity

Summary of comments: Multiple commenters recommended that BSEE align the regulations with the testing requirements of API Standard 53 and allow the use of alternative pressure testing systems that can determine test validity in less than 5 minutes. The commenters requested that BSEE clarify the statement in paragraph (b) that states "…test must hold pressure long enough to demonstrate the tested component(s) holds the required pressure."

- **Response:** BSEE disagrees with the recommendation that BSEE should allow the use of systems that can test in less than 5 minutes. More research and consistency is necessary before BSEE will be in a position to allow pressure testing systems that demonstrate test validity in less than 5 minutes. BSEE also disagrees with the commenters' request to clarify that the test must hold pressure long enough to demonstrate the tested component(s) holds the required pressure, because more research and consistency is necessary before BSEE will be in a position to validate alternative timeframes.

Comments related to proposed § 250.737(d) – Verification of ROV intervention functions

Summary of comments: Multiple commenters recommended that any additional installed ROV intervention functions must be verified per the equipment owner's maintenance program, but not to exceed once per year.

- **Response:** BSEE disagrees with this recommendation. BSEE wants to ensure that operators verify all ROV hot stabs prior to commencing operations on each well.

Comments related to proposed § 250.737(d)(2) and (3) – Review of testing results

Summary of comments: Multiple commenters opposed the proposed removal of the requirement that the operator must provide the initial test results to the District Manager if BSEE cannot witness testing. The commenters expressed concerns with removing the real-time supervision of the methods used to conduct inspections of well control system components, asserting that the change would allow too much discretion to operators, and would remove a safeguard that prevents inadequate testing, thus reducing safety.

- **Response:** BSEE disagrees with the assertion that the removal of the requirement to provide the initial test results to BSEE, when BSEE is unable to witness testing, reduces safety. BSEE reviews the test results during routine inspections of facilities. The operator is still required to make the results available to BSEE upon request for verification. BSEE also retains the option for BSEE to witness the testing.

Comments related to proposed § 250.737(d)(3)(iv) – Testing of ROV panels during stump testing

Summary of comments: A commenter asserted that, since BSEE proposed that BOP ROV panels should not be required to have open functions, BSEE should remove the requirement to test systems that currently have open functions for rams on the ROV panels. The commenter was concerned that operators with systems that already have open functions for rams will remove them so they do not have to test.

- **Response:** BSEE disagrees with the comment. The referenced testing requirement is applicable to the stump test, which is performed before the BOP is installed. The stump test is used to verify the functionality of the ROV components while on the surface, before the equipment is run subsea and latched onto the well. BSEE wants to ensure that the equipment, as configured, is operational before it is run subsea.

Comments related to proposed § 250.737(d)(4)(v) – Verifying closure of rams through ROV hot stabs

Summary of comments: A commenter asserted that although the proposed method for confirming closure of the rams may be a valid method of verifying closure, there are other methods that should be approved, such as position indicators, and a combination of parameters such as volume, time, and a pressure spike at the end of travel. The commenter asserted that the pressure of 1,000 psi seems completely arbitrary and had been specifically rejected by BSEE in the alternate procedure/departures section of the August 17, 2016 WCR presentation in Houston, Texas.

- **Response:** BSEE disagrees with the recommendation to accept use of the identified methods to confirm closure of the rams. More research and data is necessary to fully evaluate those methods and BSEE may include those methods in future rulemakings, depending on future findings. BSEE is allowing the use of 1000 psi pressure for the ROV test because that is sufficient to verify functionality of the system. The BOP system and each BOP component are still required to be fully pressure tested according to § 250.737(b).

Comments related to proposed § 250.737(d)(5)(ii) – Testing of remote panels

Summary of comments: Multiple commenters recommended that BSEE revise the regulations to allow additional alignment between the proposed rule and API Standard 53, Section 7.6.5.1.4, which states, "[i]f installed, remote panels where all BOP functions are not included (*e.g*. lifeboat panels, etc.) shall be function tested in accordance with the equipment owner's procedures." The commenters asserted that the inclusion of the phrase "in accordance with the equipment owner's procedures" in the regulations would allow the operator to conduct the test with the BOP on-deck and would not alter the effectiveness or intent of the proposed BSEE text.

- **Response:** BSEE disagrees with the comment. Operators must function test the remote panels upon the initial BOP test to ensure functionality with the complete installed system. On-deck testing alone is not sufficient.

Comments related to proposed § 250.737(d)(3)(v) – Stump test procedures

Summary of comments: Multiple commenters expressed concerns with the proposed revisions to § 250.737(d)(3)(v) that stated "pressure testing of each ram and annular component is only required once." The commenters further expressed concerns with BSEE's proposed rationale to eliminate "unnecessarily duplicative pressure testing" and to limit the risk of component wear. Section 250.737(c) requires repeat testing if a pressure test under § 250.737(b) and (c) is not successful. The commenters asserted that the proposed revision to § 250.737(d)(3)(v) does not appear to take into account the possibility of a failed test and the need for a repeat test.

The commenters further asserted that the Department also proposed to weaken § 250.737(d)(5)(i)(A) and (B) by reducing BOP control station testing from weekly to every other week and that this change would cut in half the BOP control station testing frequency.

- **Response:** BSEE disagrees with the assertion that the proposed revisions would weaken the regulations. Paragraph (d)(3)(v) applies to the stump testing which is conducted prior to the subsea BOP stack being latched onto the well. The stump test is the main opportunity to identify and correct issues with the stack before deployment. There is additional required testing once the BOP stack is installed, plus regularly scheduled testing during operations while the BOP is latched onto the well. Section 250.737(c) requires a successful pressure test of the required components and applies to paragraph (d). Accordingly, paragraph (c) states that "If the equipment does not hold the required pressure during a test, you must correct the problem and retest the affected component(s)."

Comments related to proposed § 250.737(d)(12)(iv) – Deadman test procedures

Summary of comments: A commenter disagreed with the proposed changes to the deadman system test procedures. The commenter expressed concerns with the proposed revision that would only require operators to record starting and stopping pressure to determine deadman closing efficiency.

- **Response:** BSEE disagrees that there is any basis for concern. Paragraph (d)(12)(iv) testing is used to verify that there is sufficient accumulator capacity for the required BOP deadman functions. Documenting the final pressure on the subsea accumulator after a deadman test is sufficient to verify that the subsea accumulation system can deliver the necessary fluid volume to execute this emergency operation. This verification demonstrates the system is adequately deployed in the application on the well for safe operation.

Comments related to proposed § 250.737(d)(12)(vi) – Deadman test procedures

Summary of comments: A commenter asserted that BSEE's proposed revision to paragraph (d)(12)(vi) would place a significant amount of trust in industry self-regulation because the revision seems to allow for operators to conduct the deadman test at low pounds per square inch (psi) during the test, as long as operators complete the test with an acceptable psi. The commenter recommended that BSEE provide justification for the revisions.

- **Response:** BSEE is allowing the use of a 1000 psi test for the initial deadman test because that is sufficient to verify functionality of the system. The components utilized within the deadman system are still required to be fully pressure tested according to § 250.737(d)(4). BSEE will oversee compliance with and enforcement of these testing requirements and will not rely on industry self-regulation.

What must I do in certain situations involving BOP equipment or systems? (§ 250.738)

This section of the existing regulations describes actions that operators must take when certain situations occur with BOP systems, such as if the BOP equipment does not hold the required pressure during a test or if the BOP control station or pod does not function properly.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraphs (b), (i), (m), and (o) by replacing the references to BAVOs with references to an independent third party throughout.

BSEE proposed to revise paragraph (f) to clarify the testing requirements implemented by the 2016 WCR necessary to verify the integrity of the affected casing ram or casing shear ram and connections. This proposed revision would codify BSEE policy to allow the pressure testing to test the pressure of the BOP component above this ram, as specified in the approved permit.

BSEE also proposed to revise paragraph (m) to replace the term "well-control equipment" with "circulating or ancillary equipment." This revision would eliminate confusion arising from the use of conflicting terms that may have different meanings throughout the regulations.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and generally includes the proposed language in the final rule without change, except for the following revisions. BSEE is reversing the order of existing paragraphs (b)(3) and (b)(4), and redesignating them appropriately. This change was necessary to avoid confusion about the process for submitting and then getting BSEE approval and reflects the logical order for the process. BSEE is revising final paragraph (b)(3) with conforming edits to §§ 250.720 and 250.734, to require operators to submit a revised permit instead of a report. The revised permit must include a written statement from an independent third party documenting the BOP repairs, replacement, or reconfiguration and certifying that the previous certification under § 250.731(c) remains valid. This revision is necessary to be consistent with the independent third-party certification comments on proposed § 250.720 and BSEE's final approach to that provision. This revision will provide BSEE with additional assurance that the relevant BOP system is fit for service upon relatch and reflects current BSEE practice. The independent third-party certification contains the same type of information operators submit with their original required BSEE permits. This revision provides assurance that there is a current certification of the BOP and provides consistent documentation of recertification.

BSEE removes the language "with the new, repaired, or reconfigured BOP." from existing paragraph (b)(3); redesignated by this final rule as paragraph (b)(4) because they are redundant to the updated introductory language for paragraph (b).

Summary of Comments:

Comments related to proposed § 250.738(f) – Shell test for casing rams

Summary of comments: Multiple commenters agreed with the intent of this revision, but requested that BSEE clarify the timing and location of the test.

- **Response**: BSEE disagrees that the timing and location of the shell test needs to be clarified. The regulations state that the operator must conduct the shell test before running casing.

Comments related to § 250.738 – Riser gas handler systems

Summary of comments: A commenter recommended requiring the use of a riser gas handler system for all rigs with marine risers. The commenter asserted that requiring the use of riser gas handler systems would safely manage gas in the marine riser, prevent future incidents like *Deepwater Horizon*, and prevent environmental damage.

- **Response**: BSEE disagrees with the recommendation to require the use of a riser gas handler system on all wells. Operators are currently allowed to use riser gas handler systems pursuant to this section. However, it is beyond the scope of this rulemaking to require it for all rigs with marine risers. BSEE may evaluate the use of riser gas handler systems for possible inclusion in future rulemakings.

Comments related to proposed § 250.738(b) – Reverification of BOP system

Summary of comments: A commenter recommended that BSEE should consider requiring a report from an independent third party if operations are interrupted due to the events listed in § 250.720(a)(1). The commenter asserted that the events listed in § 250.720(a)(1) would invalidate a verification submitted under §§ 250.732(c) and 250.731(d) and that consideration should be given to including or moving these requirements to § 250.738, as well.

- **Response:** BSEE agrees with the commenter, in part, and added a requirement for submitting a revised permit with a written statement from an independent third party certifying that the previous certification under § 250.731(c) remains valid. BSEE also made corresponding edits to similar requirements in §§ 250.734 and 250.738. These revisions help ensure that the BOP remains fit for service at the same location.

What are the BOP maintenance and inspection requirements? (§ 250.739)

This section of the existing regulations details the maintenance and inspection requirements for BOPs. The requirements include: meeting or exceeding minimum thresholds for maintenance and inspection; a complete breakdown and physical inspection of the BOP every 5 years; a visual inspection of the surface BOP system on a daily basis; and training of all personnel who maintain, inspect, or repair BOPs.

<u>Summary of proposed revisions:</u>

BSEE proposed to revise paragraph (b) by replacing "complete breakdown and detailed physical inspection" with a "major, detailed inspection," identifying examples of well control system components, replacing references to the BAVO with references to an independent third party, and replacing the requirement to have a BAVO present during each inspection with a requirement for an independent third party to review inspection results.

BSEE proposed replacing "complete breakdown and detailed physical inspection" with a "major, detailed inspection" to correct the industry misconception, prevalent since the promulgation of the 2016 WCR, that each component of the BOP must be dismantled to its smallest possible part. This was never the intent behind this provision of the 2016 WCR and the proposed revisions would clarify BSEE's positions on the 2016 WCR requirement and resolve perceived ambiguities, without substantively altering the inspection requirement.

BSEE also proposed to remove the requirement for the BAVO to be present during each inspection and replace it with a requirement that an independent third party review the inspections results. BSEE expects the independent third party to review the documentation of the inspections to help ensure that the appropriate entities accurately and appropriately complete the activities. The proposed revisions would ease the logistical and economic burdens derived from the 2016 WCR requirement to have the BAVO onsite at all times during all inspections.

<u>Summary of final rule revisions:</u>

BSEE received and considered comments on these provisions of the proposed rule and includes the proposed language in the final rule without change. BSEE received comments in general support and opposition to the proposed changes, in addition to the following comments.

<u>Summary of Comments:</u>

Comments related to proposed § 250.739 – BOP complete breakdown versus major detailed inspection.

Summary of comments: Multiple commenters asserted that the proposed rule would make a number of provisions more confusing. For example, one proposed revision to § 250.739 replaces the requirement for regular "complete breakdowns and detailed physical inspections" with a requirement for "major, detailed inspections." The commenters asserted that changing this phrase makes the associated requirements less specific, adds ambiguity to otherwise clear language, and leaves some testing requirements open for interpretation, which cannot ensure the safety and environmental protection provided by BOPs. The commenters suggested that BSEE should be more specific in its proposed regulation in explaining how far the BOP must be broken down to meet an acceptable BOP "major, detailed" 5-year inspection.

- **Response:** BSEE disagrees with the assertion that the proposed language adds ambiguity regarding what is required for the 5 year inspection. This revision is designed to provide clarity and eliminate misconceptions regarding the existing inspection requirement, not to substantively alter that requirement. BSEE expects this 5-year inspection to be conducted in the same manner, whether it is called a complete breakdown and detailed physical inspection or a major detailed inspection. This revision is consistent with the guidance posted on the BSEE website at https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule. As discussed in the proposed rule, BSEE used the term "major detailed inspection" to correct the industry misconception prevalent since the promulgation of the 2016 WCR that each BOP component must be dismantled to its smallest possible part. This was never the intent behind this provision of the 2016 WCR. These revisions clarify BSEE's position on the 2016 WCR requirements and resolve perceived ambiguities, without substantively altering the inspection requirement.

Summary of comments: Multiple commenters supported the proposed clarification to the rule. The commenters asserted that the proposed language codifies clarification previously given by BSEE regarding the intent of the phrase "complete breakdown" in the current regulation and also ensures that proven industry practice to phase recertification as part of a continuous maintenance and inspection program is acceptable. The commenters also asserted that this approach is consistent with the requirements of API Standard 53 and that BSEE appropriately retained the requirement that inspections be documented and reviewed by an independent third party.

- **Response:** BSEE agrees with the commenter and no changes are necessary.

Comments related to proposed § 250.739 – BAVO present during inspections

Summary of comments: Multiple commenters asserted that BSEE proposed to weaken the rule by eliminating the requirement for a BAVO to be physically present at the 5-year BOP inspection and by proposing an inadequate substitute of having a third-party inspector read industry's inspection report after-the-fact before compiling its own report. The commenters asserted that if a third-party inspector is not physically present at the 5-year BOP inspection, that person would not have the opportunity to physically inspect the equipment, collect independent data and photos, or make recommendations for repairs/replacements before the BOP is returned to service or rebuilt. The commenters further asserted that any report prepared by a third-party absent the opportunity to participate in the actual inspection would have little value and would come much too late in the process to effect real change/improvement.

- **Response**: BSEE disagrees with the assertions that having an independent third party reviewing the documents, instead of being physically present for the inspections, is inadequate. BSEE requires the independent third party to review the documentation of the inspections and compile a detailed inspection report. These independent third party responsibilities help ensure that the appropriate entities accurately and appropriately complete the inspection activities, as well as identify any necessary corrective actions. The independent third party document review allows the comparison of the design data with the current status of the equipment. The intent of the major inspection is to verify that the well control system components are fit for service and within design tolerances to be utilized for specific well conditions. These goals can be verified during a data review and do not require the independent third party to be physically present during the major inspection to make that determination. Because the inspection may be performed in phased intervals, as provided in the 2016 WCR, having a BAVO or third party present during the inspection would not be practical or logistically feasible. For example, in the situation where the rig is arriving on the OCS from overseas, the independent third party would not be present during any maintenance and inspections, and the independent third party review of the major inspections results would correspond to the certifications and verifications required by §§ 250.731 and 250.732, without being present during the inspections.

What are the coiled tubing and snubbing requirements? (§ 250.750)

This is a new section in which BSEE proposed to consolidate coiled tubing and snubbing operational requirements.

Summary of proposed revisions:

The content of this proposed section was moved from current §§ 250.616 and 250.1706, both titled *Coiled tubing and snubbing operations* and removed and reserved both in this final rule. BSEE proposed this section to consolidate some of the minimum BOP system component requirements for coiled tubing and snubbing operations. BSEE proposed minor revisions to the original language to conform to the applicable operations covered under Subpart G. BSEE also proposed to add paragraph (d) to conform snubbing unit testing with updated requirements.

Summary of final rule revisions:

BSEE did not receive any comments specific to this section and only received one comment asking how the proposed requirements of a different section apply to coiled tubing operations. Based on BSEE's review and continued analysis of the proposed rule and the single comment applicable to coiled tubing, BSEE is making administrative and technical revisions by modifying the proposed undesignated center heading and separating out the coiled tubing and snubbing requirements to create separate sections only applicable to snubbing operations. To avoid confusion between coiled tubing and snubbing requirements in this final rule, BSEE is separating their respective requirements into different sections. The coiled tubing requirements are addressed under new §§ 250.750, *What are the coiled tubing requirements?* and 250.751, *Coiled tubing testing requirements*. The requirements for snubbing operations, which were proposed as §250.750 paragraphs (b), (c), and (d), were revised and moved to new § 250.760, *What are the snubbing requirements?* in the final rule. BSEE is also including minor clarifications to the proposed text to more accurately reflect BSEE's longstanding coiled tubing practices. BSEE is removing "with the production tree in place" proposed in paragraph (a) because coiled tubing requirements apply to any well operation that uses coiled tubing. BSEE is also adding "follow the applicable requirements of this subpart…" to final §§ 250.750(a) and 250.760(a) to align with the Q and A guidance on the BSEE website at https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule. Many regulations contained in Subpart G are applicable to coiled tubing operations, such as, but not limited to, the items listed in the relevant Q and A on the BSEE website at https://www.bsee.gov/guidance-and-regulations/regulations/well-control-rule.

BSEE is adding new paragraph (b) to clarify that BSEE considers all coiled tubing operations to be non-routine. BSEE is making this clarification based on our review of the proposed rule and a review of the comments associated with the definition of routine operations in § 250.601, *Definitions*. This clarification also codifies longstanding BSEE policy that considers operations with a coiled tubing unit to be non-routine and require a permit. This addition helps clarify the approval process for use of coiled tubing for workovers.

Coiled tubing testing requirements. (§ 250.751)

This is a new section in which BSEE proposed to consolidate coiled tubing and snubbing operational requirements.

<u>Summary of proposed revisions:</u>

BSEE proposed to add this section to codify current BSEE policy regarding the coiled tubing testing and recording requirements. In this addition, BSEE proposed to reintroduce language similar to provisions that were inadvertently removed from the regulations through the 2016 WCR, consolidating elements from §§ 250.617 and 250.1707 of the regulations as they existed before the 2016 WCR. Both sections are currently reserved. BSEE proposed revisions to the original language to conform to the applicable requirements of Subpart G. For example, in the proposed rule, this section would not include the former provisions regarding testing of the coiled tubing connector, because the proposal would instead state that operators "must test the coiled tubing unit in accordance with § 250.737 paragraphs (a), (b), (c), (d)(9), and (d)(10)." Section 250.737 requires testing of the system when installed and provides testing criteria. As proposed, identifying the connector testing in this section is not necessary because it is already covered by the testing requirements of § 250.737.

<u>Summary of final rule revisions:</u>

BSEE did not receive any comments specific to this section. BSEE is making minor revisions to better reflect changes to the undesignated center heading that applies only to coiled tubing. As previously stated in the final rule discussion under § 250.750, based on BSEE's review of the proposed rule, BSEE is revising this new section and separating out the snubbing requirements, creating a separate section applicable only to snubbing operations under final § 250.760.

What are the snubbing requirements? (§ 250.760)

Summary of proposed revisions:

BSEE did not propose to add this new section, however the content was included in proposed § 250.750.

Summary of final rule revisions:

BSEE is adding this new section and undesignated center heading to clarify the snubbing requirements. To avoid confusion between coiled tubing and snubbing requirements in this final rule, BSEE is separating their respective requirements into different sections and relocating the proposed snubbing requirements under this new section. The content of this section is being moved from proposed § 250.750(b), (c), and (d), with minor conforming revisions to reflect the separation of coiled tubing requirements and the applicability only to snubbing operations and equipment. These changes are administrative and non-substantive. BSEE did not receive comments on the relevant language from proposed § 250.750 and is finalizing it as described.

Subpart Q—Decommissioning Activities

What are the general requirements for decommissioning? (§ 250.1703)

This section of the existing regulations details decommissioning requirements, including getting District Manager approval, permanently plugging all wells, removing all platforms and facilities, decommissioning all pipelines, and clearing the seafloor of obstructions.

Summary of proposed revisions:

BSEE proposed to revise paragraph (b) to clarify that only packers or bridge plugs used as mechanical barriers are required to comply with ANSI/API Spec. 11D1. BSEE proposed this revision to codify BSEE's policy to ensure that the required mechanical barriers in a well are held to a higher standard than other common packers or bridge plugs used for various well specific conditions and completions design. Furthermore, BSEE is aware that certain packers and bridge plugs cannot meet the specifications of ANSI/API Spec. 11D1. This revision would reduce the number of alternate equipment requests submitted to BSEE. BSEE also proposed to add that operators must have two independent barriers, one being mechanical, in the exposed center wellbore (*e.g.*, this could be the tubing or casing depending on the well configuration) prior to removing the tree or well control equipment. BSEE proposed this addition to codify BSEE policy, align the well decommissioning requirements with similar requirements from §§ 250.720(a) and 250.1712(g), and to help ensure the well is properly secured before removal of the tree or well control equipment.

Summary of final rule revisions:

BSEE received no substantive comments on these provisions of the proposed rule, however BSEE did receive comments on similar mechanical barrier requirements in §§ 250.518 and 250.619. Based on its consideration of the comments, BSEE is revising paragraph (b) to clarify that only the required mechanical barrier must be ANSI/API Spec. 11D1 qualified. This revision is consistent with the similar requirements in final §§ 250.518 and 250.619 and BSEE's implementation of the mechanical barrier requirements finalized in the 2016 WCR.

What decommissioning applications and reports must I submit and when must I submit them? (§ 250.1704)

This section of the existing regulations provides a table that identifies the required decommissioning applications and subsequent reports, as well as the deadlines for when to submit them.

Summary of proposed revisions:

BSEE proposed to revise paragraph (g) by shifting the requirements for submittal of the site clearance verification activity information to an Application for Permit to Modify (APM). The site clearance verification activity information will be removed from the end of operations report (EOR). BSEE proposed these revisions to better reflect current practice and limit redundant reporting.

BSEE also proposed to revise paragraph (h) by adding the submittal of the decommissioning activity information, upon completion, to the EOR. BSEE proposed these revisions to better reflect current practice and limit redundant reporting.

Summary of final rule revisions:

BSEE received and considered comments on the proposed revisions and includes the proposed language in the final rule without change.

Summary of Comments:

Comments related to proposed § 250.1704 – Plug and Abandonment plans

Summary of comments: One commenter suggested that plugging and abandonment plans should be based on risk acceptance and planned on a well-by-well basis. The commenter also recommended the use of a DNV Recommended Practice.

- **Response:** BSEE disagrees with the suggestion that plugging and abandonment activities should be based on risk. BSEE does not consider a risk assessment by itself sufficient for determination of all plugging and abandonment operations. Plugging and abandonment operations are currently conducted on a well specific basis as approved within the applicable BSEE permits. BSEE will review the identified DNV Recommended Practice for possible inclusion in future rulemakings, as appropriate.

Coiled tubing and snubbing operations. (§ 250.1706)

Summary of proposed revisions:

BSEE proposed to remove and reserve this section. BSEE proposed to move the content of this existing regulation to proposed § 250.750. BSEE proposed these revisions to help eliminate inconsistencies between similar requirements spread throughout different regulatory subparts by consolidating those requirements into Subpart G, which is applicable to drilling, completions, workovers, and decommissioning operations.

Summary of final rule revisions:

BSEE received no substantive comments on these provisions of the proposed rule and will remove and reserve this section in the final rule.

Must I notify BSEE before I begin well plugging operations? (§ 250.1713)

Summary of proposed revisions:

BSEE proposed to remove and reserve this section. Based upon BSEE experience with the implementation of the 2016 WCR, BSEE determined that the submittal of the information required by this section is redundant with similar rig movement notification information required under § 250.712, *What rig unit movements must I report?*

Summary of final rule revisions:

BSEE received no substantive comments on these provisions of the proposed rule and will remove and reserve this section in the final rule.

To what depth must I remove wellheads and casings? (§ 250.1716)

This section of the existing regulations establishes the minimum depth below the mud line for removal of all wellheads and casings, unless an alternate depth is approved by the District Manager.

Summary of proposed revisions:

BSEE proposed to revise paragraph (b)(3) by changing the water depth criteria for when BSEE may approve an alternate depth for removal of the wellhead or casing from 800 meters to 1000 feet. At depths greater than 1,000 feet, there is little risk of obstruction to other users of the OCS or its waters or contact with other equipment, and little risk of safety or environmental issues from removal to an alternate depth.

Summary of final rule revisions:

BSEE received comments in general support of the proposed revisions to this section and is including the proposed language in the final rule without change.

If I install a subsea protective device, what requirements must I meet? (§ 250.1722)

This section of the existing regulations states that if a subsea protective device is installed, then it must be done in a manner that allows fishing gear to pass over the obstruction without damage to the obstruction, the protective device, or the fishing gear.

Summary of proposed revisions:

BSEE proposed to revise paragraph (d) to direct the submittal of the trawl test report to the EOR rather than an APM. This proposed revision would not affect the substance of the reporting requirement or the information BSEE receives, only the mechanism through which it is received.

Summary of final rule revisions:

BSEE received no substantive comments on these provisions of the proposed rule and includes the proposed language in the final rule without change.

VI. Procedural Matters

Regulatory Planning and Review (Executive Orders (E.O.) 12866, 13563, and 13771).

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) within the OMB will review all significant rules. This action is an economically significant regulatory action that was submitted to OMB for review as it would have a positive annual effect on the economy of $100 million or more. BSEE coordinated development of an economic analysis to assess the anticipated costs and potential benefits of the final rule. The significant positive economic effect on the economy is the result of the estimated cost savings of this rule. BSEE estimates the amendments in this rulemaking would save the regulated industry $152 million annually over ten years (discounted at 7 percent).

Details on the estimated cost savings of this rule can be found in the rule's regulatory impact analysis. The cost savings for this final rule are due to regulatory clarifications, reduction in paperwork burdens, adoption of industry standards, and migration to performance-based standards for select provisions.

This rule revises regulatory provisions in 30 CFR part 250, subparts D, E, F, G, and Q. BSEE has reassessed a number of the provisions in the (1014-AA11) 2016 WCR and revises some provisions to reflect performance-based standards rather than prescriptive requirements. Other revisions reduce or eliminate parts of the paperwork burden, without impacting the current levels of safety and environmental protection. BSEE sought the best available data and information to analyze the economic impact of these changes. The Regulatory Impact Analysis (RIA) for this rulemaking can be found in the https://www.regulations.gov/ docket (Docket ID: BSEE-2018-0002). The Final RIA (FRIA) indicates that the estimated overall cost savings to the industry over the next 10 years would exceed $1.5 billion in nominal dollars.

BSEE revised certain provisions of the 2016 WCR to support the goals of the Administration's regulatory reform initiatives, while ensuring safety and environmental protection. BSEE has received additional information since the publication of the 2016 WCR and revisited several of the compliance cost assumptions in the economic analysis for the 2016 final rule. The modifications to the BSEE compliance cost estimates in the 2016 WCR analysis are primarily because that analysis:

1.) Underestimated the cost for revising permits or reporting certain operations to the District Manager (§§ 250.428 and 250.722), and

2.) Underestimated both the number of subsea BOPs that would require modifications and the cost of those modifications under the 1014-AA11 regulations (§ 250.734).

The revisions to existing ram and accumulator requirements for subsea BOPs (§ 250.734) yield cost savings of $369 million (nominal $). The changes to § 250.734 better align the shear ram provisions with API Standard 53 and revise the accumulator capacity requirements for subsea BOP stacks.

With changes to § 250.737, BSEE is allowing operators to move to a 21-day BOP testing interval upon satisfaction of certain conditions. These changes align the testing interval with industry and global standards and help avoid premature wear and tear on critical components. BSEE expects operators using subsea BOPs to seek to move to a 21-day interval, realizing a cost savings of $919 million (nominal $) over 10-years. The changes to this provision represent the single largest cost savings in the rule.

This rule will reduce the regulatory burden on industry, while maintaining worker safety and environmental protection. BSEE is providing industry flexibility, when practical, to meet the safety or equipment standards, rather than specifying the compliance method. For example, BSEE will eliminate the requirement that operators resubmit an APD in the event of planned mud losses or inadequate cement jobs. Instead, BSEE will allow the operator to outline remedial actions to these scenarios in contingency plans included in the original BSEE-approved APD. This revision will not change the operational responses to these events, and therefore reduces the paperwork burden and expensive operational downtime without affecting operational risks. Other changes remove BOP stack certification requirements regarding design specifications and equipment conditions and replace the BAVO requirements for BOP systems and system components with independent third party requirements. The previous provisions were either duplicative or required a more burdensome certification process than reasonably necessary. The changes to the certification processes do not affect worker safety and the environment.

The revisions to final § 250.734 better define the BOP components functionality requirements, revise the requirements for ROV capability and functionality, and amend accumulator capacity requirements for subsea BOP stacks. This revision to the accumulator requirements increases operator flexibility to utilize the appropriate accumulator capacity to perform the necessary emergency functions. Through the implementation of the WCR, BSEE was able to better evaluate the effects of the WCR accumulator requirements on subsea BOP space and weight limitations. After reevaluating the API 53 standards, BSEE agrees that certain prescriptive requirements in the current regulations are unnecessary. The regulatory text revisions to § 250.734 align BSEE regulations with the performance standards in API Standard 53, ensuring the subsea accumulator capacity is sufficient to actuate the BOP ram functions necessary to seal the well. This performance standard meets the intent of the 1014-AA11 WCR without the prescriptive and unnecessarily burdensome requirements.

The § 250.737 paragraph (d)(5) amendments allow operators to alternate BOP tests between the two control stations rather than testing from both control stations on each test. The rule returns the regulations to pre-2016 WCR regulatory language in order to prevent the additional wear and tear on the BOP components. This change aligns BSEE regulations with the industry testing standards.

BSEE's estimate of the net total, annualized and discounted regulatory cost savings can be found in the following table.

Total 10-Year Estimated Cost Savings Associated with Amendments to Subparts D, E, F, G, and Q

Year	Undiscounted	Discounted at 3%	Discounted at 7%
Total	**$1,543,093,357**	**$1,309,246,758**	**$1,067,468,876**
Annualized	**$154,309,336**	**$153,483,661**	**$151,983,553***

* The annualized cost savings assuming the rule is effective in 2019 and discounted over an infinite time horizon, would be $60,996,080 at a 7% discount rate (using 2016$).

This rule reduces the burden imposed on industry, while ensuring continued safety and environmental protection. Additional information on the compliance costs, savings, and benefits can be found in the FRIA posted in the docket.

This rule revises multiple provisions in the current regulations to implement performance-based provisions based upon reasonably obtainable safety, technical, economic, and other information. Other redundant or unnecessary reporting requirements are also being eliminated. BSEE is providing industry flexibility, when practical, to meet the safety or equipment standards, rather than specifying the compliance method. Based on a consideration of the qualitative and quantitative safety and environmental factors related to the rule, BSEE's assessment is that it is consistent with the policies of the applicable E.O.s and the OCSLA.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The E.O. directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Executive Order 13771 requires Federal agencies to take proactive measures to reduce the costs associated with complying with Federal regulations. This rule is an E.O. 13771 deregulatory action.

Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act

The Regulatory Flexibility Act, 5 U.S.C. 601-612, requires agencies to analyze the economic impact of regulations when a significant economic impact on a substantial number of small entities is likely and to consider regulatory alternatives that will achieve the agency's goals, while minimizing the burden on small entities. In addition, the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 601 note, requires agencies to produce compliance guidance for small entities if the rule has a significant economic impact. For the reasons explained in this analysis, BSEE believes the rule may have a significant economic impact and, therefore, a Regulatory Flexibility Analysis (RFA) for the rule is required by the Regulatory Flexibility Act. The RFA, which assesses the impact of this rule on small entities, can be found in the FRIA within the docket for this rulemaking.

As defined by the Small Business Administration (SBA), a small entity is one that is "independently owned and operated and which is not dominant in its field of operation." What characterizes a small business varies from industry to industry in order to properly reflect industry size differences. This rule affects lease operators that are conducting OCS drilling or well operations. BSEE's analysis shows this includes about 69 companies with active drilling or well operations. Of the 69 companies, 21 (30 percent) are large and 48 (70 percent) are small. Entities affected by this rule are classified primarily under North American Industry Classification System (NAICS) codes 211120 (Crude Petroleum Extraction), 211130 (Natural Gas Extraction), and 213111 (Drilling Oil and Gas Wells). The rule indirectly impacts OCS drilling contractors that are classified under NAICS code 21311, however this analysis focuses on the OCS oil and gas lessees and operators to which the rule's provisions will apply directly. For NAICS codes 211120 and 211130, SBA defines a small company as having fewer than 1,251 employees.

BSEE considers that a rule will have an impact on a "substantial number of small entities" when the total number of small entities impacted by the rule is equal to or exceeds 10 percent of the relevant universe of small entities in a given industry. BSEE's analysis shows that there are 48 small companies with active operations on the OCS and all of these companies could be impacted by the rule if conducting drilling or well operations. Therefore, BSEE expects that the rule would affect a substantial number of small entities.

Large companies are responsible for the majority of activity in deepwater, where subsea BOPs are used with floating MODUs. BSEE's first-order estimate for the rule's small entity cost savings is proportional to the number of drilling rigs being operated or contracted by small companies (circa October 2017).

This rule is a deregulatory action; BSEE has evaluated possible costs and benefits and has estimated that there is an overall associated cost savings. BSEE has estimated the annualized cost savings by regulatory provision and then allocated those savings to small or large entities based on drilling/well activity (circa October, 2017; activity breakouts can be found in the RFA). The changes to §§ 250.423, 250.734, and 250.737(d)(5) would only apply to subsea BOPs and would yield cost savings that sum to $47,421,114. All remaining changes apply to all well operations or subsea/surface BOPs and yield cost savings that sum to $106,888,221. Using the share of small and large companies subject to each suite of provisions, we estimate that small companies would realize 25 percent of the cost savings from this rule and large companies 75 percent. The allocation is displayed in the following table.

Cost Savings by Operator Size (Undiscounted Annualized $)

Provision	**Small Companies**		**Large Companies**		**Total Cost Savings**
	Percent of Operators	**Cost Savings**	**Percent of Operators**	**Cost Savings**	
Subsea BOP Provisions	12%	$5,578,955	88%	$41,842,160	$47,421,114
All Other Provisions	30%	$32,315,044	70%	$74,573,178	$106,888,221
TOTAL:		$37,893,998 (25% of Total)		$116,415,337 (75% of Total)	$154,309,336

This rule:

a. Will have a positive economic effect on the economy of $100 million or more. The cost savings will not materially affect the economy nationally or in any local area.

b. Will not cause a major increase in costs or prices for consumers; individual industries; Federal, State, Tribal, or local governments; or regions of the nation. This rule will have positive effects on OCS operators and is not anticipated to negatively impact oil, gas, and sulfur production or the cost of fuels for consumers.

c. Will not have significant or adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

This rule is a major rule because it will have an annual effect on the economy of $100 million or more in at least one year of the 10-year period analyzed. The requirements apply to all entities operating on the OCS regardless of company designation as a small business. For more information on the small business impacts, see the RFA in the FRIA. Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman, and to the Regional Small Business Regulatory Fairness Board. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of BSEE, call 1-888-REG-FAIR (1-888-734-3247).

Unfunded Mandates Reform Act of 1995

This final rule will not impose an unfunded mandate on State, local, or tribal governments or the private sector of more than $100 million per year. The final rule will not have a significant or unique effect on State, local, or tribal governments or the private sector. A statement containing the information required by the Unfunded Mandates Reform Act (2 U.S.C. 1531 *et seq.*) is not required.

Takings Implication Assessment (E.O. 12630)

Under the criteria in E.O. 12630, this final rule does not have significant takings implications. The rule is not a governmental action capable of interference with constitutionally protected property rights. A Takings Implication Assessment is not required.

Federalism (E.O. 13132)

Under the criteria in section 1 of E.O. 13132, this final rule does not have sufficient federalism implications to warrant the preparation of a federalism summary impact statement. This rule will not substantially and directly affect the relationship between the Federal and State governments. To the extent that State and local governments have a role in OCS activities, this rule will not affect that role. A federalism summary impact statement is not required.

The BSEE has the authority to regulate offshore oil and gas drilling, completion, workover, and decommissioning operations. State governments do not have authority over offshore drilling, completion, workover, and decommissioning operations on the OCS. None of the changes in this rule will affect areas that are under the jurisdiction of the States. It will not change the way that the States and the Federal government interact, or the way that States interact with private companies.

Civil Justice Reform (E.O. 12988)

This final rule complies with the requirements of E.O. 12988. Specifically, this rule:

(1) Meets the criteria of section 3(a) requiring that all regulations be reviewed to eliminate errors and ambiguity and be written to minimize litigation; and

(2) Meets the criteria of section 3(b)(2) requiring that all regulations be written in clear language and contain clear legal standards.

Consultation with Indian Tribes (E.O. 13175)

BSEE is committed to regular and meaningful consultation and collaboration with tribes on policy decisions that have tribal implications. Under the criteria in E.O. 13175 and the Department’s Policy on Consultation with Indian Tribes (S.O. 3317, Amendment 2, dated

December 31, 2013), we have evaluated this final rule and determined that it has no substantial direct effects on federally recognized Indian tribes.

National Technology Transfer and Advancement Act (NTTAA)

BSEE complies with the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 3701 *et seq.*) requirement that an agency "use standards developed or adopted by voluntary consensus standards bodies rather than government-unique standards, except where inconsistent with applicable law or otherwise impractical." (OMB Circular A–119 at p. 13). BSEE also complies with the OFR regulations governing incorporation by reference. (*See*, 1 CFR part 51.) Those regulations specify the process for updating an incorporated standard at § 51.11(a), including seeking approval by OFR for a change to a standard incorporated by reference in a final rule.

Paperwork Reduction Act (PRA) of 1995

This final rule contains collections of information that will be submitted to OMB for review and approval under the PRA, 44 U.S.C. 3501 *et seq*. As part of its continuing effort to reduce paperwork and burdens on respondents, BSEE invites the public and other Federal agencies to comment on any aspect of the reporting and recordkeeping burden. If you wish to comment on the information collection (IC) aspects of this final rule, you may send your comments directly to OMB and send a copy of your comments to the Regulations and Standards Branch (see the ADDRESSES section of this final rule). Please reference 30 CFR 250, subpart G, Blowout Preventer Systems and Well Control, 1014-0028, in your comments. To see a copy of the information collection request submitted to OMB, go to http://www.reginfo.gov (select Information Collection Review, Currently Under Review); or you may obtain a copy of the supporting statement for the collection of information by contacting the Bureau's Information Collection Clearance Officer at (703) 787-1607.

The PRA provides that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB is required to make a decision concerning the collection of information contained in these regulations 30–60 days after publication of this document in the *Federal Register*.

The public may comment, at any time, on the accuracy of the IC burden in this rule and may submit any comments to DOI/BSEE; ATTN: Regulations and Standards Branch; VAE–ORP; 45600 Woodland Road, Sterling, VA 20166; email *kye.mason@bsee.gov*, or fax (703) 787–1093.

The title of the collection of information for this rule is 30 CFR part 250, Blowout Preventer Systems and Well Control Revisions (Final Rulemaking). The final regulations concern BOP system requirements and maintaining well control, among others, and the information is used in BSEE's efforts to regulate oil and gas operations on the OCS to protect life and the environment, conserve natural resources, and prevent waste.

Potential respondents comprise Federal OCS oil, gas, and sulphur operators and lessees. Responses to this collection of information are mandatory, or are required to obtain or retain a benefit; they are also submitted on occasion, daily and weekly (during drilling operations), monthly, quarterly, biennially, and as a result of situations encountered, depending upon the requirement. The IC does not include questions of a sensitive nature. The BSEE will protect proprietary information according to the Freedom of Information Act (5 U.S.C. 552) and DOI implementing regulations (43 CFR part 2), 30 CFR part 252, *OCS Oil and Gas Information*

Program, and 30 CFR 250.197, *Data and information to be made available to the public or for limited inspection.*

This final rule will increase BSEE's IC inventory by +87,744 annual hour burdens; as well as increase annual non-hour costs burdens by $10,918,000 for Independent Third Party (ITP) costs. BSEE-Approved Verification Organization (BAVO); is being replaced with ITP. In connection with the original WCR, BSEE assumed hour burdens in place of non-hour costs associated with BAVO submissions; however, in this final rule, we are capturing non-hour costs associated with hiring ITPs. Below is a list of the current OMB Control Numbers affected by this final rulemaking and their associated increases/decreases in hour burdens and non-hour costs:

- Applications for Permits to Drill (APD-1014-0025, expiration 4/30/20) will increase annual burden by +14,523 hours annually (-69 hours due to this rulemaking, and +14,592 due to re-estimating the annual number of response) and increase +$3,999,000 annual non-hour costs for ITP;
- Applications for Permits to Modify (APM-1014-0026, expiration 7/31/20) will decrease annual burden by -33 hours (+277 hours due to this rulemaking, and -310 hours due to re-estimating the annual number of responses) and increase +$6,138,000 annual non-hour costs for ITP;
- Subpart A (1014-0022, expiration 2/28/21), BSEE is not making any changes to hour-burden or non-hour costs;
- Subpart B (1014-0024, expiration 10/31/21), BSEE is not making any changes to hour-burden or non-hour costs;
- Subpart D (1014-0018, expiration 3/31/2021) will increase the annual burden by +40 hours (+40 due to this rulemaking) and increase +$16,000 annual non-hour costs for ITP;

Subpart G (1014-0028, expiration 07/31/19) will increase annual burden by +73,214 hours (+4,048 hours is due to this rulemaking and +69,166 hours due to re-estimating the annual number of responses) and increase +$765,000 annual non-hour costs for ITP.

The following is a brief explanation of how the final regulatory changes will affect the various subpart hour burdens:

Application for Permit to Drill (APD) 1014-0025:

§ 250.414(c)(2) is new and will allow operators the option to submit the required justification and documentation for a proposed alternative safe drilling margin for BSEE approval at an earlier date prior to the APD. This will increase the annual burden hour by 15 hours.

§ 250.428 removes the requirement to resubmit an APD in the event of planned mud losses, or remedial actions for inadequate cement jobs, if these circumstances are addressed in the original approved APD. Reductions will be shown during the renewal process (see Discussion of Final Rule Requirements above).

§ 250.724(b) will eliminate the requirement to submit certification that you have a real-time monitoring plan that meets the criteria listed. This will decrease the annual hour burden by 109 hours (see Discussion of Final Rule Requirements above).

§ 250.731 will add Independent Third Party costs, increasing the non-hour cost burdens by $31,000 per submission (see Discussion of Final Rule Requirements above). During this rulemaking it was discovered that BSEE had underestimated the number of responses/submittals. We are increasing that by 128 submittals annually, which in turn increase the annual hour burden by 14,592 hours.

§ 250.738(b) requires operators submit a revised permit with a written statement from an independent third party documenting the repairs, replacement, or reconfiguration and certifying that the previous certification in § 250.731(c) remains valid. This will increase the annual hour burden by 25 hours (see Discussion of Final Rule Requirements above).

Application for Permit to Modify (APM) 1014-0026:

§ 250.724(b) will eliminate the requirement to submit certification that you have a real-time monitoring plan that meets the criteria listed. This will decrease the annual hour burden by 125 hours (see Discussion of Final Rule Requirements above).

§ 250.731 will add Independent Third Party costs, increasing the non-hour cost burdens by $31,000 per submission (total of $6,138,000 annual non-hour costs) (see Discussion of Final Rule Requirements above). During this rulemaking it was discovered that BSEE had overestimated the number of responses/submittals. We are decreasing that by 62 responses; which in turn decrease the annual hour burden by 310 hours.

§ 250.750(a)(4) requires operators that plan to conduct operations without downhole check valves, describe alternate procedures and equipment in Form BSEE-0124, APM, and have it approved by the District Manager. The responses/burden associated with § 250.616 (245 approvals x .75 hour = 184 annual hour burdens) and § 250.1706 (503 requests x .25 hour = 126 annual hour burdens) are being relocated to 250.750(a)(4) (for a total of 748 requests x 1 hour); increasing the annual hour burden by 438 hours (see Discussion of Final Rule Requirements above).

§ 250.1722(d) will direct the submittal of the trawl test report to the End of Operations Report (EOR) rather than an APM; and will decrease the annual hour burden by 36 hours (see Discussion of Final Rule Requirements above).

Subpart A 1014-0022:

§ 250.115 is the regulatory text from § 250.198 but moved and relocated to § 250.115. This burden will remain the same and is covered under § 250.141 (see Discussion of Final Rule Requirements above).

§ 250.423 is rewording the requirement in a manner that will reduce the number of alternative procedure or equipment requests under § 250.141. Reductions will be shown during the renewal process (see Discussion of Final Rule Requirements above).

Subpart B 1014-0024

§ 250.292(p) will require less information to be submitted in the DWOP. Reductions will be shown during the renewal process (see Discussion of Final Rule Requirements above).

Subpart D 1014-0018

§ 250.427(b) will revise the requirement to include a notification to BSEE District Manager. BSEE is also clarifying that the District Manager must review and approve proposed remedial actions. This will increase the annual hour burden by 40 hours (see Discussion of Final Rule Requirements above).

§ 250.462(e)(1) will add Independent Third Party costs increasing the non-hour cost burdens by $8,000 per notification (total of $16,000 annual non-hour costs) (see Discussion of Final Rule Requirements above).

§ 250.1722 will direct the submittal of the trawl test report to the End of Operations Report (EOR) rather than an APM. Burden hours associated with Subpart Q are already covered under EOR reporting. Any reductions/increases will be shown during the renewal process (see Discussion of Final Rule Requirements above).

Subpart G 1014-0028

§ 250.720(a)(3) will require operators submit a revised permit with a written statement from an independent third party certifying that the previous certification remains valid and to request and receive District Manager approval before resuming operations after unlatching the BOP or LMRP. This will increase the annual hour burden by 13 hours (see Discussion of Final Rule Requirements above).

§ 250.720(d) was proposed but had been inadvertently omitted from the information collection. The requirement is new and will require operators to identify and make available for BSEE inspection, specified equipment used solely for intervention operations. This will increase the annual hour burden by 10 hours (see Discussion of Final Rule Requirements above).

§ 250.722(a)(2) will require operators to document successful pressure test in the Well Activity Report (WAR). This will increase the annual hour burden by 150 hours (see Discussion of Final Rule Requirements above).

§ 250.730(c)(2) will increase the annual hour burden by 5 hours. Based on comments received BSEE is clarifying how to request an extension to the failure analysis timeframe. Furthermore, they must submit an extension request to the Chief, Office of Offshore Regulatory Programs, detailing how the investigation and analysis will get completed to BSEE for approval (see Discussion of Final Rule Requirements above).

New § 250.732(a) will add Independent Third Party costs, increasing the non-hour cost burdens by $5,100 per verification (total increase is $765,000 annual non-hour costs) (see Discussion of Final Rule Requirements above).

Old § 250.732(a) will eliminate the requirement to request and submit for approval all relevant information to become a BAVO. This will decrease the annual hour burden by 700 hours (see Discussion of Final Rule Requirements above).

New § 250.732(d) requires operators to make all documentation that demonstrates compliance with the requirements of this section available to BSEE upon request; increasing the annual hour burden by 40 hours (see Discussion of Final Rule Requirements above).

Old § 250.732(d) will eliminate the submission of Mechanical Integrity Assessment Reports; decreasing the annual hour burden by 900 hours (see Discussion of Final Rule Requirements above).

§ 250.737(a)(4) and (d)(10) (test frequency for function test shear rams) will increase the annual hour burden by 75 hours. BSEE is requiring operators that wish to request approval for a 21-day BOP testing frequency, demonstrate the development of a BOP health monitoring plan (including, but not limited to, information/requirements such as condition monitoring tool; failure propagation analysis; a failure tracking and resolution system that includes detailed failure reports and identification of recurring problems). In addition, this will increase annual hour burdens by 100 hours to submit quarterly reports of the data collected with the health monitoring plan to the BSEE Regional Supervisor, District Field Operations (see Discussion of Final Rule Requirements above).

§ 250.737(d)(5) will allow for alternating tests between two control stations. This will increase the annual hour burden by 25 hours (see Discussion of Final Rule Requirements above).

§ 250.751 will include the coiled tubing testing and recording requirements that were inadvertently removed in the original Well Control Rule. This will increase the annual hour burden by 3,630 hours (see Discussion of Final Rule Requirements above).

Once this rule becomes effective, BSEE will use the current OMB control numbers for the affected subparts discussed and will have their information collection burdens adjusted accordingly through the renewal process.

National Environmental Policy Act of 1969 (NEPA)

BSEE has prepared a final environmental assessment (EA) that concludes that this final rule will not have a significant impact on the quality of the human environment under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*). The final EA supports the issuance of a Finding of No Significant Impact (FONSI) for the rule, therefore the preparation of an environmental impact statement pursuant to NEPA is not required. A copy of the final EA and FONSI can be viewed at www.regulations.gov (use the keyword/ID "BSEE-2018-0002").

Data Quality Act

In developing this rule, we did not conduct or use a study, experiment, or survey requiring peer review under the Data Quality Act (Pub. L. 106-554, app. C, sec. 515, 114 Stat. 2763, 2763A-153-154).

Effects on the Nation's Energy Supply (E.O. 13211)

This final rule is not a significant energy action under the definition in E.O. 13211. Although the rule is a significant regulatory action under E.O. 12866, it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. A Statement of Energy Effects is not required.

Severability

If a court holds any provisions of this final rule or their applicability to any persons or circumstances invalid, the remainder of the provisions and their applicability to other people or circumstances will not be affected.

List of Subjects in 30 CFR Part 250

Administrative practice and procedure, Continental shelf, Continental Shelf—mineral resources, Continental Shelf—rights-of-way, Environmental impact statements, Environmental protection, Government contracts, Incorporation by reference, Investigations, Oil and gas exploration, Penalties, Pipelines, Reporting and recordkeeping requirements, Sulfur.

Joseph R. Balash,

Assistant Secretary -- Land and Minerals Management,

U.S. Department of the Interior.

For the reasons stated in the preamble, the Bureau of Safety and Environmental Enforcement (BSEE) amends 30 CFR part 250 as follows:

PART 250—OIL AND GAS AND SULFUR OPERATIONS IN THE OUTER CONTINENTAL SHELF

1. The authority citation for part 250 continues to read as follows:

Authority: 30 U.S.C. 1751, 31 U.S.C. 9701, 33 U.S.C. 1321(j)(1)(C), 43 U.S.C. 1334.

Subpart A—General

2. Add § 250.115 to read as follows:

§ 250.115 What are the procedures for, and effects of, incorporation of documents by reference in this part?

For the documents incorporated by reference in this part:

(a) Incorporation by reference of a document is limited to the edition of the document, or the specific edition and supplement or addendum, that is cited in § 250.198. Future amendments or revisions of the incorporated document are not included. BSEE will publish any changes to the incorporation of the document in the *Federal Register* and amend § 250.198 as appropriate.

(b) BSEE may make a rule amending the incorporation of a document effective without prior opportunity for public comment when BSEE determines:

(1) That the revisions to the document result in safety improvements or represent new industry standard technology and do not impose undue costs on the affected parties; and

(2) BSEE meets the requirements for making a rule immediately effective under 5 U.S.C. 553.

(c) The effect of incorporation by reference of a document into the regulations in this part is that the incorporated document is a requirement. When a section in this part refers to an incorporated document, you are responsible for complying with the provisions of that entire document, except to the extent that the section that refers to the document provides otherwise. When a section in this part refers to a part of an incorporated document, you are responsible for complying with that part of the document as provided in that section.

(d) Under §§ 250.141 and 250.142, you may comply with a later edition of a specific document incorporated by reference, provided:

(1) You show that complying with the later edition provides a degree of protection, safety, or performance equal to or better than would be achieved by compliance with the listed edition; and

(2) You obtain prior written approval for alternative compliance from the authorized BSEE official.

3. Revise § 250.198 to read as follows:

§ 250.198 Documents incorporated by reference.

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All incorporated material is available for inspection at the Houston BSEE office at 1919 Smith Street, Suite 14042, Houston, Texas 77002 and is available from the sources indicated in this section. It is also available for inspection at the National Archives and Records Administration (NARA). To make an appointment to inspect incorporated material at the Houston BSEE office, call 1-844-259-4779. For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal-register/cfr/ibr-locations.html.

(a) American Concrete Institute (ACI), ACI Standards, 38800 Country Club Drive, Farmington Hills, MI 48331-3439: *http://www.concrete.org;* phone: 248-848-3700:

(1) ACI Standard 318-95, Building Code Requirements for Reinforced Concrete, 1995; incorporated by reference at § 250.901.

(2) ACI 318R-95, Commentary on Building Code Requirements for Reinforced Concrete, 1995; incorporated by reference at § 250.901.

(3) ACI 357R-84, Guide for the Design and Construction of Fixed Offshore Concrete Structures, 1984; reapproved 1997, incorporated by reference at § 250.901.

(b) American Gas Association (AGA Reports), 400 North Capitol Street, NW, Suite 450, Washington, DC 20001, *http://www.aga.org;* phone: 202-824-7000;

(1) AGA Report No. 7—Measurement of Natural Gas by Turbine Meters; Revised February 2006; incorporated by reference at § 250.1203(b);

(2) AGA Report No. 9—Measurement of Gas by Multipath Ultrasonic Meters; Second Edition, April 2007; incorporated by reference at § 250.1203(b);

(3) AGA Report No. 10—Speed of Sound in Natural Gas and Other Related Hydrocarbon Gases; Copyright 2003; incorporated by reference at § 250.1203(b).

(c) American Institute of Steel Construction, Inc. (AISC), AISC Standards, One East Wacker Drive, Suite 700, Chicago, IL 60601-1802; *http://www.aisc.org;* phone: 312-670-2400:

(1) ANSI/AISC 360-05, Specification for Structural Steel Buildings, incorporated by reference at § 250.901.

(2) [Reserved]

(d) American National Standards Institute (ANSI), *http.www./webstore.ansi.org/;* phone: 212-642-4900:

(1) ANSI/ASME B 16.5-2003, Pipe Flanges and Flanged Fittings, incorporated by reference at § 250.1002;

(2) ANSI/ASME B 31.8-2003, Gas Transmission and Distribution Piping Systems, incorporated by reference at §250.1002;

(3) ANSI Z88.2-1992, American National Standard for Respiratory Protection, incorporated by reference at § 250.490.

(e) American Petroleum Institute (API), API Recommended Practices (RP), Specs, Standards, Manual of Petroleum Measurement Standards (MPMS) chapters, 1220 L Street, NW, Washington, DC 20005-4070; *http://www.api.org;* phone: 202-682-8000:

(1) API 510, Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration, Tenth Edition, May 2014; Addendum 1, May 2017; incorporated by reference at §§ 250.851(a) and 250.1629(b);

(2) API 570, Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems, Fourth Edition, February 2016; Addendum 1, May 2017; incorporated by reference at § 250.841(b).

(3) API Bulletin 2INT-DG, Interim Guidance for Design of Offshore Structures for Hurricane Conditions, May 2007; incorporated by reference at § 250.901;

(4) API Bulletin 2INT-EX, Interim Guidance for Assessment of Existing Offshore Structures for Hurricane Conditions, May 2007; incorporated by reference at § 250.901;

(5) API Bulletin 2INT-MET, Interim Guidance on Hurricane Conditions in the Gulf of Mexico, May 2007; incorporated by reference at § 250.901;

(6) API Bulletin 92L, Drilling Ahead Safely with Lost Circulation in the Gulf of Mexico, First Edition, August 2015; incorporated by reference at § 250.427(b);

(7) API MPMS Chapter 1—Vocabulary, Second Edition, July 1994; incorporated by reference at § 250.1201;

(8) API MPMS Chapter 2—Tank Calibration, Section 2A—Measurement and Calibration of Upright Cylindrical Tanks by the Manual Tank Strapping Method, First Edition, February 1995; reaffirmed February 2007; incorporated by reference at § 250.1202;

(9) API MPMS Chapter 2—Tank Calibration, Section 2B—Calibration of Upright Cylindrical Tanks Using the Optical Reference Line Method, First Edition, March 1989; reaffirmed, December 2007; incorporated by reference at § 250.1202;

(10) API MPMS Chapter 3—Tank Gauging, Section 1A—Standard Practice for the Manual Gauging of Petroleum and Petroleum Products, Second Edition, August 2005; incorporated by reference at §250.1202;

(11) API MPMS Chapter 3—Tank Gauging, Section 1B—Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging, Second Edition, June 2001; reaffirmed, October 2006; incorporated by reference at § 250.1202;

(12) API MPMS Chapter 4—Proving Systems, Section 1—Introduction, Third Edition, February 2005; incorporated by reference at § 250.1202;

(13) API MPMS Chapter 4—Proving Systems, Section 2—Displacement Provers, Third Edition, September 2003; incorporated by reference at § 250.1202;

(14) API MPMS Chapter 4—Proving Systems, Section 4—Tank Provers, Second Edition, May 1998, reaffirmed November 2005; incorporated by reference at § 250.1202;

(15) API MPMS Chapter 4—Proving Systems, Section 5—Master-Meter Provers, Second Edition, May 2000, reaffirmed, August 2005; incorporated by reference at § 250.1202;

(16) API MPMS Chapter 4—Proving Systems, Section 6—Pulse Interpolation, Second Edition, May 1999; reaffirmed 2003; incorporated by reference at § 250.1202;

(17) API MPMS Chapter 4—Proving Systems, Section 7—Field Standard Test Measures, Second Edition, December 1998; reaffirmed 2003; incorporated by reference at § 250.1202;

(18) API MPMS Chapter 4—Proving Systems, Section 8—Operation of Proving Systems; First Edition, reaffirmed March 2007; incorporated by reference at § 250.1202(a), (f), and (g);

(19) API MPMS Chapter 5—Metering, Section 1—General Considerations for Measurement by Meters, Fourth Edition, September 2005; incorporated by reference at § 250.1202;

(20) API MPMS Chapter 5—Metering, Section 2—Measurement of Liquid Hydrocarbons by Displacement Meters, Third Edition, September 2005; incorporated by reference at § 250.1202;

(21) API MPMS Chapter 5—Metering, Section 3—Measurement of Liquid Hydrocarbons by Turbine Meters, Fifth Edition, September 2005; incorporated by reference at § 250.1202;

(22) API MPMS Chapter 5—Metering, Section 4—Accessory Equipment for Liquid Meters, Fourth Edition, September 2005; incorporated by reference at § 250.1202;

(23) API MPMS Chapter 5—Metering, Section 5—Fidelity and Security of Flow Measurement Pulsed-Data Transmission Systems, Second Edition, August 2005; incorporated by reference at § 250.1202;

(24) API MPMS Chapter 5—Metering, Section 6—Measurement of Liquid Hydrocarbons by Coriolis Meters; First Edition, reaffirmed, March 2008; incorporated by reference at § 250.1202(a);

(25) API MPMS Chapter 5—Metering, Section 8—Measurement of Liquid Hydrocarbons by Ultrasonic Flow Meters Using Transit Time Technology; First Edition, February 2005; incorporated by reference at § 250.1202(a);

(26) API MPMS Chapter 6—Metering Assemblies, Section 1—Lease Automatic Custody Transfer (LACT) Systems, Second Edition, May 1991; reaffirmed, April 2007; incorporated by reference at § 250.1202;

(27) API MPMS Chapter 6—Metering Assemblies, Section 6—Pipeline Metering Systems, Second Edition, May 1991; reaffirmed, February 2007; incorporated by reference at §250.1202;

(28) API MPMS Chapter 6—Metering Assemblies, Section 7—Metering Viscous Hydrocarbons, Second Edition, May 1991; reaffirmed, April 2007; incorporated by reference at § 250.1202;

(29) API MPMS Chapter 7—Temperature Determination, First Edition, June 2001; reaffirmed, March 2007; incorporated by reference at §250.1202;

(30) API MPMS Chapter 8—Sampling, Section 1—Standard Practice for Manual Sampling of Petroleum and Petroleum Products, Third Edition, October 1995; reaffirmed, March 2006; incorporated by reference at § 250.1202;

(31) API MPMS Chapter 8—Sampling, Section 2—Standard Practice for Automatic Sampling of Liquid Petroleum and Petroleum Products, Second Edition, October 1995; reaffirmed, June 2005; incorporated by reference at § 250.1202;

(32) API MPMS Chapter 9—Density Determination, Section 1—Standard Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method, Second Edition, December 2002; reaffirmed October 2005; incorporated by reference at § 250.1202(a) and (l);

(33) API MPMS Chapter 9—Density Determination, Section 2—Standard Test Method for Density or Relative Density of Light Hydrocarbons by Pressure Hydrometer, Second Edition, March 2003; incorporated by reference at § 250.1202;

(34) API MPMS Chapter 10—Sediment and Water, Section 1—Standard Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method, Third Edition, November 2007; incorporated by reference at § 250.1202;

(35) API MPMS Chapter 10—Sediment and Water, Section 2—Standard Test Method for Water in Crude Oil by Distillation, Second Edition, November 2007; incorporated by reference at § 250.1202;

(36) API MPMS Chapter 10—Sediment and Water, Section 3—Standard Test Method for Water and Sediment in Crude Oil by the Centrifuge Method (Laboratory Procedure), Third Edition, May 2008; incorporated by reference at § 250.1202;

(37) API MPMS Chapter 10—Sediment and Water, Section 4—Determination of Water and/or Sediment in Crude Oil by the Centrifuge Method (Field Procedure), Third Edition, December 1999; incorporated by reference at § 250.1202;

(38) API MPMS Chapter 10—Sediment and Water, Section 9—Standard Test Method for Water in Crude Oils by Coulometric Karl Fischer Titration, Second Edition, December 2002; reaffirmed 2005; incorporated by reference at § 250.1202;

(39) API MPMS Chapter 11.1—Volume Correction Factors, Volume 1, Table 5A—Generalized Crude Oils and JP-4 Correction of Observed API Gravity to API Gravity at 60 °F, and Table 6A—Generalized Crude Oils and JP-4 Correction of Volume to 60 °F Against API Gravity at 60 °F, API Standard 2540, First Edition, August 1980; reaffirmed March 1997; incorporated by reference at § 250.1202;

(40) API MPMS Chapter 11.2.2—Compressibility Factors for Hydrocarbons: 0.350-0.637 Relative Density (60 °F/60 °F) and −50 °F to 140 °F Metering Temperature, Second Edition, October 1986; reaffirmed: December 2007; incorporated by reference at § 250.1202;

(41) API MPMS Chapter 11—Physical Properties Data, Section 1—Temperature and Pressure Volume Correction Factors for Generalized Crude Oils, Refined Products, and Lubricating Oils; May 2004 (incorporating Addendum 1, September 2007); incorporated by reference at § 250.1202(a), (g), and (l);

(42) API MPMS Chapter 11—Physical Properties Data, Addendum to Section 2, Part 2—Compressibility Factors for Hydrocarbons, Correlation of Vapor Pressure for Commercial Natural Gas Liquids, First Edition, December 1994; reaffirmed, December 2002; incorporated by reference at § 250.1202;

(43) API MPMS Chapter 12—Calculation of Petroleum Quantities, Section 2—Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, Part 1—Introduction, Second Edition, May 1995; reaffirmed March 2002; incorporated by reference at § 250.1202;

(44) API MPMS Chapter 12—Calculation of Petroleum Quantities, Section 2—Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, Part 2—Measurement Tickets, Third Edition, June 2003; incorporated by reference at § 250.1202;

(45) API MPMS Chapter 12—Calculation of Petroleum Quantities, Section 2—Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, Part 3—Proving Reports; First Edition, reaffirmed 2009; incorporated by reference at § 250.1202(a) and (g);

(46) API MPMS Chapter 12—Calculation of Petroleum Quantities, Section 2—Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction

Factors, Part 4—Calculation of Base Prover Volumes by the Waterdraw Method, First Edition, December 1997; reaffirmed, 2009; incorporated by reference at § 250.1202(a), (f), and (g);

(47) API MPMS Chapter 14—Natural Gas Fluids Measurement, Section 3—Concentric, Square-Edged Orifice Meters, Part 1—General Equations and Uncertainty Guidelines, Third Edition, September 1990; reaffirmed, January 2003; incorporated by reference at § 250.1203;

(48) API MPMS Chapter 14—Natural Gas Fluids Measurement, Section 3—Concentric, Square-Edged Orifice Meters, Part 2—Specification and Installation Requirements, Fourth Edition, April 2000; reaffirmed March 2006; incorporated by reference at § 250.1203;

(49) API MPMS Chapter 14—Natural Gas Fluids Measurement, Section 3—Concentric, Square-Edged Orifice Meters; Part 3—Natural Gas Applications; Third Edition, August 1992; Errata March 1994, reaffirmed, February 2009; incorporated by reference at § 250.1203;

(50) API MPMS Chapter 14.5/GPA Standard 2172-09; Calculation of Gross Heating Value, Relative Density, Compressibility and Theoretical Hydrocarbon Liquid Content for Natural Gas Mixtures for Custody Transfer; Third Edition, January 2009; incorporated by reference at § 250.1203;

(51) API MPMS Chapter 14—Natural Gas Fluids Measurement, Section 6—Continuous Density Measurement, Second Edition, April 1991; reaffirmed, February 2006; incorporated by reference at § 250.1203;

(52) API MPMS Chapter 14—Natural Gas Fluids Measurement, Section 8—Liquefied Petroleum Gas Measurement, Second Edition, July 1997; reaffirmed, March 2006; incorporated by reference at § 250.1203;

(53) API MPMS Chapter 20—Section 1—Allocation Measurement, First Edition, September 1993; reaffirmed October 2006; incorporated by reference at § 250.1202;

(54) API MPMS Chapter 21—Flow Measurement Using Electronic Metering Systems, Section 1—Electronic Gas Measurement, First Edition, August 1993; reaffirmed, July 2005; incorporated by reference at § 250.1203;

(55) API MPMS Chapter 21—Flow Measurement Using Electronic Metering Systems, Section 2—Electronic Liquid Volume Measurement Using Positive Displacement and Turbine Meters; First Edition, June 1998; incorporated by reference at § 250.1202(a);

(56) API MPMS Chapter 21—Flow Measurement Using Electronic Metering Systems, Addendum to Section 2—Flow Measurement Using Electronic Metering Systems, Inferred Mass; First Edition, reaffirmed February 2006; incorporated by reference at § 250.1202(a);

(57) API RP 2A-WSD, Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms—Working Stress Design, Twenty-first Edition, December 2000; Errata and Supplement 1, December 2002; Errata and Supplement 2, September 2005; Errata and Supplement 3, October 2007; incorporated by reference at §§ 250.901, 250.908, 250.919, and 250.920;

(58) API RP 2D, Operation and Maintenance of Offshore Cranes, Sixth Edition, May 2007; incorporated by reference at § 250.108;

(59) API RP 2FPS, RP for Planning, Designing, and Constructing Floating Production Systems; First Edition, March 2001; incorporated by reference at § 250.901;

(60) API RP 2I, In-Service Inspection of Mooring Hardware for Floating Structures; Third Edition, April 2008; incorporated by reference at § 250.901(a) and (d);

(61) ANSI/API RP 2N, Third Edition, “Recommended Practice for Planning, Designing, and Constructing Structures and Pipelines for Arctic Conditions”, Third Edition, April 2015; incorporated by reference at § 250.470(g);

(62) API RP 2RD, Recommended Practice for Design of Risers for Floating Production Systems (FPSs) and Tension-Leg Platforms (TLPs), First Edition, June 1998; reaffirmed, May 2006, Errata, June 2009; incorporated by reference at §§ 250.733, 250.800(c), 250.901(a), (d), and 250.1002(b);

(63) API RP 2SK, Design and Analysis of Stationkeeping Systems for Floating Structures, Third Edition, October 2005, Addendum, May 2008, reaffirmed June 2015; incorporated by reference at §§ 250.800(c) and 250.901(a) and (d);

(64) API RP 2SM, Recommended Practice for Design, Manufacture, Installation, and Maintenance of Synthetic Fiber Ropes for Offshore Mooring, First Edition, March 2001, Addendum, May 2007; incorporated by reference at §§ 250.800(c) and 250.901(a) and (d);

(65) API RP 2T, Recommended Practice for Planning, Designing, and Constructing Tension Leg Platforms, Second Edition, August 1997; incorporated by reference at § 250.901(a) and (d);

(66) ANSI/API RP 14B, Design, Installation, Operation, Test, and Redress of Subsurface Safety Valve Systems, Sixth Edition, September 2015; incorporated by reference at §§ 250.802(b), 250.803(a), 250.814(d), 250.828(c), and 250.880(c);

(67) API RP 14C, Recommended Practice for Analysis, Design, Installation, and Testing of Basic Surface Safety Systems for Offshore Production Platforms, Seventh Edition, March 2001, reaffirmed: March 2007; incorporated by reference at §§ 250.125(a), 250.292(j), 250.841(a), 250.842(a), 250.850, 250.852(a), 250.855, 250.856(a), 250.858(a), 250.862(e), 250.865(a), 250.867(a), 250.869(a) through (c), 250.872(a), 250.873(a), 250.874(a), 250.880(b) and (c), 250.1002(d), 250.1004(b), 250.1628(c) and (d), 250.1629(b), and 250.1630(a);

(68) API RP 14E, Recommended Practice for Design and Installation of Offshore Production Platform Piping Systems, Fifth Edition, October 1991; reaffirmed, January 2013; incorporated by reference at §§ 250.841(b), 250.842(a), and 250.1628(b) and (d);

(69) API RP 14F, Recommended Practice for Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class 1, Division 1 and Division 2 Locations, Upstream Segment, Fifth Edition, July 2008, reaffirmed: April 2013; incorporated by reference at §§ 250.114(c), 250.842(c), 250.862(e), and 250.1629(b);

(70) API RP 14FZ, Recommended Practice for Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class I, Zone 0, Zone 1 and Zone 2 Locations, Second Edition, May 2013; incorporated by reference at §§ 250.114(c), 250.842(c), 250.862(e), and 250.1629(b);

(71) API RP 14G, Recommended Practice for Fire Prevention and Control on Fixed Open-type Offshore Production Platforms, Fourth Edition, April 2007; Reaffirmed, January 2013; incorporated by reference at §§ 250.859(a), 250.862(e), 250.880(c), and 250.1629(b);

(72) API RP 14J, Recommended Practice for Design and Hazards Analysis for Offshore Production Facilities, Second Edition, May 2001; reaffirmed: January 2013; incorporated by reference at §§ 250.800(b) and (c), 250.842(c), and 250.901(a) and (d);

(73) API RP 17H, Remotely Operated Tools and Interfaces on Subsea Production Systems, Second Edition, June 2013; Errata, January 2014; incorporated by reference at § 250.734(a);

(74) API RP 65, Recommended Practice for Cementing Shallow Water Flow Zones in Deepwater Wells, First Edition, September 2002; incorporated by reference at § 250.415;

(75) API RP 75, Recommended Practice for Development of a Safety and Environmental Management Program for Offshore Operations and Facilities, Third Edition, May 2004, reaffirmed May 2008; incorporated by reference at §§ 250.1900, 250.1902, 250.1903, 250.1909, 250.1920;

(76) API RP 86, API Recommended Practice for Measurement of Multiphase Flow; First Edition, September 2005; incorporated by reference at §§ 250.1202(a) and 250.1203(b);

(77) API RP 90, Annular Casing Pressure Management for Offshore Wells, First Edition, August 2006; incorporated by reference at § 250.519;

(78) API RP 500, Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division 1 and Division 2, Third Edition, December 2012; Errata January 2014, incorporated by reference at §§ 250.114(a), 250.459, 250.842(a), 250.862(a) and (e), 250.872(a), 250.1628(b) and (d), and 250.1629(b);

(79) API RP 505, Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Zone 0, Zone 1, and Zone 2, First Edition, November 1997; reaffirmed, August 2013; incorporated by reference at §§ 250.114(a), 250.459, 250.842(a), 250.862(a) and (e), 250.872(a), 250.1628(b) and (d), and 250.1629(b);

(80) API RP 2556, Recommended Practice for Correcting Gauge Tables for Incrustation, Second Edition, August 1993; reaffirmed November 2003; incorporated by reference at § 250.1202;

(81) API Spec. 2C, Specification for Offshore Pedestal Mounted Cranes, Sixth Edition, March 2004, Effective Date: September 2004; incorporated by reference at § 250.108;

(82) ANSI/API Spec. 6A, Specification for Wellhead and Christmas Tree Equipment, Twentieth Edition, October 2010; Addendum 1, November 2011; Errata 2, November 2011;

Addendum 2, November 2012; Addendum 3, March 2013; Errata 3, June 2013; Errata 4, August 2013; Errata 5, November 2013; Errata 6, March 2014; Errata 7, December 2014; Errata 8, February 2016; Addendum 4, June 2016; Errata 9, June 2016; Errata 10, August 2016; incorporated by reference at §§ 250.730, 250.802(a), 250.803(a), 250.833, 250.873(b), 250.874(g), and 250.1002(b);

(83) API Spec. 6AV1, Specification for Verification Test of Wellhead Surface Safety Valves and Underwater Safety Valves for Offshore Service, Second Edition, February 2013; incorporated by reference at §§ 250.802(a), 250.833, 250.873(b), and 250.874(g);

(84) API STD 6AV2, Installation, Maintenance, and Repair of Surface Safety Valves and Underwater Safety Valves Offshore; First Edition, March 2014; Errata 1, August 2014; incorporated by reference at §§ 250.820, 250.834, 250.836, and 250.880(c)

(85) ANSI/API Spec. 6D, Specification for Pipeline Valves, Twenty-third Edition, April 2008; Effective Date: October 1, 2008, Errata 1, June 2008; Errata 2, November 2008; Errata 3, February 2009; Addendum 1, October 2009; Contains API Monogram Annex as Part of U.S. National Adoption; ISO 14313:2007 (Identical), Petroleum and natural gas industries—Pipeline transportation systems—Pipeline valves; incorporated by reference at § 250.1002(b);

(86) ANSI/API Spec. 11D1, Packers and Bridge Plugs, Second Edition, July 2009; incorporated by reference at §§ 250.518, 250.619, and 250.1703;

(87) ANSI/API Spec. 14A, Specification for Subsurface Safety Valve Equipment, Eleventh Edition, October 2005, reaffirmed, June 2012; incorporated by reference at §§ 250.802 and 250.803(a);

(88) ANSI/API Spec. 16A, Specification for Drill-through Equipment, Third Edition, June 2004, reaffirmed August 2010; incorporated by reference at § 250.730;

(89) ANSI/API Spec. 16C, Specification for Choke and Kill Systems, First Edition, January 1993, reaffirmed July 2010; incorporated by reference at § 250.730;

(90) API Spec. 16D, Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment, Second Edition, July 2004, reaffirmed August 2013; incorporated by reference at § 250.730;

(91) ANSI/API Spec. 17D, Design and Operation of Subsea Production Systems—Subsea Wellhead and Tree Equipment, Second Edition, May 2011; incorporated by reference at § 250.730;

(92) ANSI/API Spec. 17J, Specification for Unbonded Flexible Pipe, Third Edition, July 2008, incorporated by reference at §§ 250.852(e), 250.1002(b), and 250.1007(a).

(93) ANSI/API Spec. Q1, Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry, Ninth Edition, June 2013; Errata, February 2014; Errata 2, March 2014; Addendum 1, June 2016; incorporated by reference at §§ 250.730 and 250.801(b) and (c);

(94) API Standard 53, Blowout Prevention Equipment Systems for Drilling Wells, Fourth Edition, November 2012, Addendum 1, July 2016, incorporated by reference at §§ 250.730, 250.734, 250.735, 250.736, 250.737, and 250.739;

(95) API Standard 65—Part 2, Isolating Potential Flow Zones During Well Construction; Second Edition, December 2010; incorporated by reference at §§ 250.415(f) and 250.420(a);

(96) API Standard 2552, USA Standard Method for Measurement and Calibration of Spheres and Spheroids, First Edition, 1966; reaffirmed, October 2007; incorporated by reference at § 250.1202;

(97) API Standard 2555, Method for Liquid Calibration of Tanks, First Edition, September 1966; reaffirmed March 2002; incorporated by reference at § 250.1202;

(f) American Society of Mechanical Engineers (ASME), 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900; http://www.asme.org; phone: 1-800-843-2763

(1) 2017 ASME Boiler and Pressure Vessel Code (BPVC), Section I, Rules for Construction of Power Boilers, 2017 Edition, July 1, 2017, incorporated by reference at §§ 250.851(a) and 250.1629(b).

(2) 2017 ASME Boiler and Pressure Vessel Code, Section IV, Rules for Construction of Heating Boilers, 2017 Edition, July 1, 2017, incorporated by reference at §§ 250.851(a) and 250.1629(b).

(3) 2017 ASME Boiler and Pressure Vessel Code, Section VIII, Rules for Construction of Pressure Vessels; Division 1, 2017 Edition; July 1, 2017, incorporated by reference at §§ 250.851(a) and 250.1629(b).

(4) 2017 ASME Boiler and Pressure Vessel Code, Section VIII, Rules for Construction of Pressure Vessels; Division 2: Alternative Rules, 2017 Edition, July 1, 2017, incorporated by reference at §§ 250.851(a) and 250.1629(b).

(5) 2017 ASME Boiler and Pressure Vessel Code, Section VIII, Rules for Construction of Pressure Vessels; Division 3: Alternative Rules for Construction of High Pressure Vessels, 2017 Edition, July 1, 2017, incorporated by reference at §§ 250.851(a) and 250.1629(b).

(g) American Society for Testing and Materials (ASTM), ASTM Standards, 100 Bar Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959; *http://www.astm.org;* phone: 1-877-909-2786:

(1) ASTM Standard C 33-07, approved December 15, 2007, Standard Specification for Concrete Aggregates; incorporated by reference at § 250.901;

(2) ASTM Standard C 94/C 94M-07, approved January 1, 2007, Standard Specification for Ready-Mixed Concrete; incorporated by reference at § 250.901;

(3) ASTM Standard C 150-07, approved May 1, 2007, Standard Specification for Portland Cement; incorporated by reference at § 250.901;

(4) ASTM Standard C 330-05, approved December 15, 2005, Standard Specification for Lightweight Aggregates for Structural Concrete; incorporated by reference at §250.901;

(5) ASTM Standard C 595-08, approved January 1, 2008, Standard Specification for Blended Hydraulic Cements; incorporated by reference at § 250.901;

(h) American Welding Society (AWS), AWS Codes, 8669 NW 36 Street, #130, Miami, FL 33126; *http://www.aws.org;*phone: 800-443-9353:

(1) AWS D1.1:2000, Structural Welding Code—Steel, 17th Edition, October 18, 1999; incorporated by reference at § 250.901;

(2) AWS D1.4-98, Structural Welding Code—Reinforcing Steel, 1998 Edition; incorporated by reference at § 250.901;

(3) AWS D3.6M:1999, Specification for Underwater Welding (1999); incorporated by reference at § 250.901.

(i) National Association of Corrosion Engineers (NACE) International, NACE Standards, Park Ten Place, Houston, TX 77084; *http://www.nace.org;* phone: 281-228-6200:

(1) NACE Standard MR0175-2003, Standard Material Requirements, Metals for Sulfide Stress Cracking and Stress Corrosion Cracking Resistance in Sour Oilfield Environments, Revised January 17, 2003; incorporated by reference at §§ 250.490 and 250.901;

(2) NACE Standard RP0176-2003, Standard Recommended Practice, Corrosion Control of Steel Fixed Offshore Structures Associated with Petroleum Production; incorporated by reference at §250.901.

(j) International Organization for Standardization (ISO), 1, ch. de la Voie-Creuse, CP 56, CH-1211, Geneva 20, Switzerland; *www.iso.org;* phone: 41-22-749-01-11:

(1) ISO/IEC (International Electrotechnical Commission) 17011, Conformity assessment—General requirements for accreditation bodies accrediting conformity assessment bodies, First edition 2004-09-01; Corrected version 2005-02-15; incorporated by reference at §§ 250.1900, 250.1903, 250.1904, and 250.1922.

(2) ISO/IEC 17021-1, Conformity assessment—Requirements for bodies providing audit and certification of management systems—Part 1: Requirements, First Edition, June 2015, incorporated by reference at § 250.730(d).

(3) [Reserved]

(k) Center for Offshore Safety (COS), 1990 Post Oak Blvd., Suite 1370, Houston, TX 77056; *www.centerforoffshoresafety.org;* phone: 832-495-4925.

(1) COS Safety Publication COS-2-01, Qualification and Competence Requirements for Audit Teams and Auditors Performing Third-party SEMS Audits of Deepwater Operations, First Edition, Effective Date October 2012; incorporated by reference at §§ 250.1900, 250.1903, 250.1904, and 250.1921.

(2) COS Safety Publication COS-2-03, Requirements for Third-party SEMS Auditing and Certification of Deepwater Operations, First Edition, Effective Date October 2012; incorporated by reference at §§ 250.1900, 250.1903, 250.1904, and 250.1920.

(3) COS Safety Publication COS-2-04, Requirements for Accreditation of Audit Service Providers Performing SEMS Audits and Certification of Deepwater Operations, First Edition, Effective Date October 2012; incorporated by reference at §§ 250.1900, 250.1903, 250.1904, and 250.1922.

Subpart B—Plans and Information

4. Amend § 250.292 by revising paragraph (p) to read as follows:

§ 250.292 What must the DWOP contain?

* * * * *

(p) If you propose to use a pipeline free standing hybrid riser (FSHR) on a permanent installation that utilizes a buoyancy air can suspended from the top of the riser, you must provide the following information in your DWOP in the discussions required by paragraphs (f) and (g) of this section:

(1) A detailed description and drawings of the FSHR, buoy, and the associated connection system;

(2) Detailed information regarding the system used to connect the FSHR to the buoyancy air can, and associated redundancies; and

(3) Descriptions of your monitoring system and monitoring plan to monitor the pipeline FSHR and the associated connection system for fatigue, stress, and any other abnormal condition (*e.g.*, corrosion) that may negatively impact the riser system's integrity.

* * * * *

Subpart D—Oil and Gas Drilling Operations

5. Amend § 250.413 by revising paragraph (g) to read as follows:

§ 250.413 What must my description of well drilling design criteria address?

* * * * *

(g) A single plot containing curves for estimated pore pressures, formation fracture gradients, proposed drilling fluid weights (surface and downhole), planned safe drilling margin, and casing setting depths in true vertical measurements;

* * * * *

6. Amend § 250.414 by revising paragraphs (c)(2) and (c)(3) to read as follows:

§ 250.414 What must my drilling prognosis include?

* * * * *

(c) * * *

(2) In lieu of meeting the criteria in paragraph (c)(1)(ii) of this section, you may use an equivalent downhole mud weight as specified in your APD, provided that you submit adequate documentation (such as risk modeling data, off-set well data, analog data, seismic data) to justify the alternative equivalent downhole mud weight. You may submit such justification in advance of your full APD, and BSEE may consider such justification for approval when submitted. Any such approval will be contingent upon your confirmation in the APD that your plans and the information underlying your approved justification have not changed.

(3) When determining the pore pressure and lowest estimated fracture gradient for a specific interval, you must consider related off-set and analogous well behavior observations, if available.

* * * * *

7. Amend § 250.420 by revising paragraph (a)(6) to read as follows:

§ 250.420 What well casing and cementing requirements must I meet?

* * * * *

(a) * * *

(6) Provide adequate centralization consistent with the guidelines of API Standard 65 – Part 2 (as incorporated by reference in § 250.198); and

* * * * *

8. Amend § 250.421 by revising paragraphs (c), (d), (e), and (f) to read as follows:

§ 250.421 What are the casing and cementing requirements by type of casing string?

* * * * *

Casing type	Casing requirements	Cementing requirements
* * * * * * *		
(c) Surface	Design casing and select setting depths based on relevant engineering and geologic factors. These factors include the presence or absence of hydrocarbons, potential hazards, and water depths	Use enough cement to fill the calculated annular space to at least 200 feet measured depth (MD) inside the conductor casing. When geologic conditions such as near-surface fractures and faulting exist, you must use enough cement to fill the calculated annular space to the mudline.
(d) Intermediate	Design casing and select setting depth based on anticipated or encountered geologic characteristics or wellbore conditions	Use enough cement to cover and isolate all hydrocarbon-bearing zones and isolate abnormal pressure intervals from normal pressure intervals in the well. As a minimum, you must cement the annular space 500 feet MD above the casing shoe and 500 feet MD above each zone to be isolated.
(e) Production	Design casing and select setting depth based on anticipated or encountered geologic characteristics or wellbore conditions	Use enough cement to cover or isolate all hydrocarbon-bearing zones above the shoe. As a minimum, you must cement the annular space at least 500 feet MD above the casing shoe and 500 feet MD above the uppermost hydrocarbon-bearing zone.
(f) Liners	If you use a liner as surface casing, you must set the top of the liner at least 200 feet MD above the previous casing/liner shoe. If you use a liner as an intermediate string below a surface string or production casing below an intermediate string, you must set the top of the liner at least 100 feet MD above the previous casing shoe. You may not use a liner as conductor casing. A subsea well casing string whose top is above the mudline and that has been cemented back to the mudline will not be considered a liner.	Same as cementing requirements for specific casing types. For example, a liner used as intermediate casing must be cemented according to the cementing requirements for intermediate casing.

9. Amend § 250.423 by revising paragraphs (a) and (b) to read as follows:

§ 250.423 What are the requirements for casing and liner installation?

* * * * *

(a) You must ensure that the latching mechanisms or lock down mechanisms are engaged upon successfully installing the casing string.

(b) If you run a liner that has a latching mechanism or lock down mechanism, you must ensure that the latching mechanisms or lock down mechanisms are engaged upon successfully installing the liner.

* * * * *

10. Amend § 250.427 by revising paragraph (b) to read as follows:

§ 250.427 What are the requirements for pressure integrity tests?

* * * * *

(b) While drilling, you must maintain the safe drilling margin identified in § 250.414. When you cannot maintain the safe drilling margin, you must:

(1) Suspend drilling operations and submit proposed remedial actions to the District Manager. The District Manager must review and approve your proposed remedial actions, which may include limited drilling through a lost circulation zone; or

(2) Notify the District Manager and take further action in accordance with API Bulletin 92L (as incorporated by reference in § 250.198), if appropriate. You must submit a revised permit documenting any responsive actions taken.

11. Amend § 250.428 by revising paragraphs (c) and (d) to read as follows:

§ 250.428 What must I do in certain cementing and casing situations?

*   *   *   *   *

If you encounter the following situation:	Then you must . . .
* * * * * * *	
(c) Have indication of inadequate cement job (such as unplanned lost returns, no cement returns to mudline or expected height, cement channeling, or failure of equipment),	(1) Locate the top of cement by: (i) Running a temperature survey; (ii) Running a cement evaluation log; (iii) Using tracers in the cement and logging them prior to drill out; or (iv) Using a combination of these techniques. (2) Determine if your cement job is inadequate. If your cement job is determined to be inadequate, refer to paragraph (d) of this section. (3) If your cement job is determined to be adequate, report the results to the District Manager in your submitted WAR.
(d) Inadequate cement job,	Comply with § 250.428(c)(1) and take remedial actions. The District Manager must review and approve all remedial actions either through a previously approved contingency plan within the permit or remedial actions included in a revised permit before you may take them, unless immediate actions must be taken to ensure the safety of the crew or to prevent a well-control event. If you complete any immediate action to ensure the safety of the crew or to prevent a well-control event, submit a description of the action to the District Manager when that action is complete. Any changes to the well program, that are not included in the approved permit, will require submittal of a certification by a professional engineer (PE) certifying that they have reviewed and approved the proposed changes. You must also meet any other requirements of the District Manager for remedial actions.
* * * * * * *	

12. Amend § 250.433 by revising paragraph (b) to read as follows:

§ 250.433 What are the diverter actuation and testing requirements?

*   *   *   *   *

(b) For floating drilling operations with a subsea BOP stack, you must actuate the diverter system within 7 days after the previous actuation. For subsequent testing, you may partially actuate the diverter element and a flow test is not required.

*   *   *   *   *

13. Amend § 250.461 by revising paragraph (b) to read as follows:

§ 250.461 What are the requirements for directional and inclination surveys?

* * * * *

(b) *Survey requirements for a directional well.* You must conduct directional surveys on each directional well and digitally record the results. Surveys must give both inclination and azimuth at intervals not to exceed 500 feet during the normal course of drilling. Intervals during angle-changing portions of the hole may not exceed 180 feet.

* * * * *

14. Amend § 250.462 by revising paragraphs (b) introductory text, (e)(1)(ii), (e)(2)(i), (e)(3), and (e)(4) to read as follows:

§ 250.462 What are the source control, containment, and collocated equipment requirements?

* * * * *

(b) You must have access to and the ability to deploy Source Control and Containment Equipment (SCCE) and all other necessary supporting and collocated equipment to regain control of the well. SCCE means the capping stack, cap-and-flow system, containment dome, and/or other subsea and surface devices, equipment, and vessels, which have the collective purpose to control a spill source and stop the flow of fluids into the environment or to contain fluids escaping into the environment based on the determinations outlined in paragraph (a) of this section. This SCCE, supporting equipment, and collocated equipment may include, but is not limited to, the following:

* * * * *

(e) * * *

Equipment	You must:	Additional information
(1) * * *		
	(ii) Pressure test pressure containing critical components on a bi-annual basis, but not later than 210 days from the last pressure test. All pressure testing must be witnessed by BSEE (if available) and an independent third party.	Pressure containing critical components are those components that will experience wellbore pressure during a shut-in. These components include, but are not limited to: All blind rams, wellhead connectors, and outlet valves.
* * * * * * *		
(2) Production safety systems used for flow and capture operations	(i) Meet or exceed the requirements set forth in Subpart H, excluding required equipment that would be installed below the wellhead or that is not applicable to the cap and flow system.	
* * * * * * *		
(3) Subsea utility equipment,	Have all equipment utilized solely for containment operations available for inspection at all times	Subsea utility equipment includes, but is not limited to: Hydraulic power sources, debris removal, and hydrate control equipment.
(4) Collocated equipment designated by the operator in the Regional Containment Demonstration (RCD) or Well Containment Plan (WCP),	Have equipment available for inspection at all times	Collocated equipment includes, but is not limited to, dispersant injection equipment and other subsea control equipment

Subpart E—Oil and Gas Well-Completion Operations

15. Amend § 250.518 by revising paragraph (e)(1) and adding new paragraph (g) to read as follows:

§ 250.518 Tubing and wellhead equipment.

* * * * *

(e) * * *

(1) The uppermost permanently installed packer and all permanently installed bridge plugs qualified as mechanical barriers must comply with ANSI/API Spec. 11D1 (as incorporated by reference in § 250.198);

* * * * *

(g) You must have two independent barriers, one being mechanical, in the exposed center wellbore prior to removing the tree and/or well control equipment.

16. Revise § 250.519 to read as follows:

§ 250.519 What are the requirements for casing pressure management?

Once you install your wellhead, you must meet the casing pressure management requirements of API RP 90 (as incorporated by reference in § 250.198) and the requirements of §§ 250.519 through 250.531. If there is a conflict between API RP 90 and the casing pressure requirements of this subpart, you must follow the requirements of this subpart.

17. Revise § 250.522 to read as follows:

§ 250.522 How do I manage the thermal effects caused by initial production on a newly completed or recompleted well?

A newly completed or recompleted well often has thermal casing pressure during initial startup. Bleeding casing pressure during the startup process is considered a normal and necessary operation to manage thermal casing pressure; therefore, you do not need to evaluate these operations as a casing diagnostic test. After 30 days of continuous production, the initial production startup operation is complete and you must perform casing diagnostic testing as required in §§ 250.521 and 250.523.

18. Amend § 250.525 by revising paragraph (d) to read as follows:

§ 250.525 When am I required to take action from my casing diagnostic test?

* * * * *

(d) Any well that has sustained casing pressure (SCP) and is bled down to prevent it from exceeding its MAWOP, except during initial startup operations described in § 250.522;

* * * * *

19. Revise § 250.526 to read as follows:

§ 250.526 What do I submit if my casing diagnostic test requires action?

Within 14 days after you perform a casing diagnostic test requiring action under § 250.525:

You must submit either . . .	to the appropriate . . .	and it must include . . .	You must also . . .
(a) a notification of corrective action; or,	District Manager and copy the Regional Supervisor, Field Operations,	requirements under § 250.527,	submit an Application for Permit to Modify or Corrective Action Plan within 30 days of the diagnostic test.
(b) a casing pressure request,	Regional Supervisor, Field Operations,	requirements under § 250.528.	

20. Amend § 250.530 by revising paragraph (b) to read as follows:

§ 250.530 What if my casing pressure request is denied?

* * * * *

(b) You must submit the casing diagnostic test data to the appropriate Regional Supervisor, Field Operations, within 14 days of completion of the diagnostic test required under § 250.523(e).

Subpart F—Oil and Gas Well-Workover Operations

21. Amend § 250.601 by adding paragraph (m) to the definition of "routine operations" to read as follows:

§ 250.601 Definitions.

* * * * *

(m) Acid treatments

* * * * *

22. Remove and reserve § 250.616

§ 250.616 [Reserved]

23. Amend § 250.619 by revising paragraph (e)(1) and adding new paragraph (g) to read as follows:

§ 250.619 Tubing and wellhead equipment.

* * * * *

(e) * * *

(1) The uppermost permanently installed packer and all permanently installed bridge plugs qualified as mechanical barriers must comply with ANSI/API Spec. 11D1 (as incorporated by reference in § 250.198).

* * * * *

(g) You must have two independent barriers, one being mechanical, in the exposed center wellbore prior to removing the tree and/or well control equipment.

Subpart G—Well Operations and Equipment

24. Amend § 250.712 by adding paragraphs (g) and (h) to read as follows:

§ 250.712 What rig unit movements must I report?

* * * * *

(g) You are not required to report rig unit movements to and from the safe zone during the course of permitted operations.

(h) If a rig unit is already on a well, you are not required to report any additional rig unit movements on that well.

25. Amend § 250.720 by revising paragraph (a)(1) and adding paragraphs (a)(3) and (d) to read as follows:

§ 250.720 When and how must I secure a well?

(a) * * *

(1) The events that would cause you to interrupt operations and notify the District Manager include, but are not limited to, the following:

(i) Evacuation of the rig crew;

(ii) Inability to keep the rig on location;

(iii) Repair to major rig or well-control equipment;

(iv) Observed flow outside the well's casing (*e.g.*, shallow water flow or bubbling); or

(v) Impending National Weather Service-named tropical storm or hurricane.

* * * * *

(3) If you unlatch the BOP or LMRP:

(i) Upon relatch of the BOP, you must test according to § 250.734(b)(2), or

(ii) Upon relatch of the LMRP, you must test according to § 250.734(b)(3); and

(iii) You must submit a revised permit with a written statement from an independent third party certifying that the previous certification under § 250.731(c) remains valid and receive District Manager approval before resuming operations.

* * * * *

(d) You must have the equipment used solely for intervention operations (*e.g.*, tree interface tools) identified, readily available, properly maintained, and available for BSEE inspection upon request. This equipment is required for subsea completed wells with a tree installed, that meet the following conditions:

(1) Have a shut-in tubing pressure that is greater than the hydrostatic pressure of the water column, or

(2) Are not capable of having the annulus monitored.

26. Amend § 250.722 by revising paragraph (a)(2) to read as follows:

§ 250.722 What are the requirements for prolonged operations in a well?

* * * * *

(a) * * *

(2) Report the results of your evaluation to the District Manager and obtain approval of those results before resuming operations. Your report must include calculations that indicate the well's integrity is above the minimum safety factors, if an imaging tool or caliper is used. District Manager approval is not required to resume operations if you conducted a successful pressure test as approved in your permit. You must document the successful pressure test in the WAR.

* * * * *

27. Amend § 250.723 by revising the introductory text and paragraph (c)(3) to read as follows:

§ 250.723 What additional safety measures must I take when I conduct operations on a platform that has producing wells or has other hydrocarbon flow?

You must take the following safety measures when you conduct operations with a rig unit on or jacked-up over a platform with producing wells or that has other hydrocarbon flow:

* * * * *

(c) * * *

(3) A MODU moves within 500 feet of a platform. You may resume production once the MODU is in place, secured, and ready to begin operations.

* * * * *

28. Revise § 250.724 to read as follows:

§ 250.724 What are the real-time monitoring requirements?

(a) When conducting well operations with a subsea BOP or with a surface BOP on a floating facility, or when operating in an high pressure high temperature (HPHT) environment, you must gather and monitor real-time well data using an independent, automatic, and continuous monitoring system capable of recording, storing, and transmitting data regarding the following:

(1) The BOP control system;

(2) The well's active fluid circulating system; and

(3) The well's downhole conditions with the bottom hole assembly tools (if any tools are installed).

(b) You must transmit these data as they are gathered, barring unforeseeable or unpreventable interruptions in transmission, and have the capability to monitor the data, using qualified personnel in accordance with a real-time monitoring plan, as provided in paragraph (c) of this section.

(c) You must develop and implement a real-time monitoring plan. Your real-time monitoring plan, and all real-time monitoring data, must be made available to BSEE upon request. Your real-time monitoring plan must include the following:

(1) A description of your real-time monitoring capabilities, including the types of the data collected;

(2) A description of how your real-time monitoring data will be transmitted during operations, how the data will be labeled and monitored by qualified personnel, and how the data will be stored as required in §§ 250.740 and 250.741;

(3) A description of your procedures for providing BSEE access, upon request, to your real-time monitoring data;

(4) The qualifications of the personnel monitoring the data;

(5) Your procedures for, and methods of, communication between rig personnel and the monitoring personnel; and

(6) Actions to be taken if you lose any real-time monitoring capabilities or communications between rig personnel and monitoring personnel, and a protocol for how you will respond to any significant and/or prolonged interruption of monitoring capabilities or communications, including your protocol for notifying BSEE of any significant and/or prolonged interruptions.

29. Revise § 250.730 to read as follows:

§ 250.730 What are the general requirements for BOP systems and system components?

(a) You must ensure that the BOP system and system components are designed, installed, maintained, inspected, tested, and used properly to ensure well control. The working-pressure rating of each BOP component (excluding annular(s)) must exceed MASP as defined for the operation. For a subsea BOP, the MASP must be determined at the mudline. The BOP system includes the BOP stack, control system, and any other associated system(s) and equipment. The BOP system and individual components must be able to perform their expected functions and be compatible with each other. Your BOP system must be capable of closing and sealing the wellbore in the event of flow due to a kick, including under anticipated flowing conditions for the specific well conditions, without losing ram closure time and sealing integrity due to the corrosiveness, volume, and abrasiveness of any fluids in the wellbore that the BOP system may encounter. Your BOP system must meet the following requirements:

(1) The BOP requirements of API Standard 53 (incorporated by reference in § 250.198) and the requirements of §§ 250.733 through 250.739. If there is a conflict between API Standard 53 and the requirements of this subpart, you must follow the requirements of this subpart.

(2) The provisions of the following industry standards (all incorporated by reference in § 250.198) that apply to BOP systems:

(i) ANSI/API Spec. 6A;

(ii) ANSI/API Spec. 16A;

(iii) ANSI/API Spec. 16C;

(iv) API Spec. 16D; and

(v) ANSI/API Spec. 17D.

(3) For surface and subsea BOPs, the pipe and variable bore rams installed in the BOP stack must be capable of effectively closing and sealing on the tubular body of any drill pipe, workstring, and tubing (excluding tubing with exterior control lines and flat packs) in the hole

under MASP, as defined for the operation, at the proposed regulator settings of the BOP control system.

(4) The current set of approved schematic drawings must be available on the rig and at an onshore location. If you make any modifications to the BOP or control system that will require changes to your BSEE-approved schematic drawings, you must suspend operations until you obtain approval from the District Manager.

(b) You must ensure that the design, fabrication, maintenance, and repair of your BOP system is in accordance with the requirements contained in this part, applicable Original Equipment Manufacturer's (OEM) recommendations unless otherwise directed by BSEE, and recognized engineering practices. The training and qualification of repair and maintenance personnel must meet or exceed applicable OEM training recommendations unless otherwise directed by BSEE.

(c) You must follow the failure reporting procedures contained in API Standard 53, (incorporated by reference in § 250.198), and:

(1) You must provide a written notice of equipment failure to the Chief, Office of Offshore Regulatory Programs (OORP), unless BSEE has designated a third party as provided in paragraph (c)(4) of this section, and the manufacturer of such equipment within 30 days after the discovery and identification of the failure. A failure is any condition that prevents the equipment from meeting the functional specification.

(2) You must ensure that an investigation and a failure analysis are started within 120 days of the failure to determine the cause of the failure, and are completed within 120 days upon starting the investigation and failure analysis. You must also ensure that the results and any corrective action are documented. You must ensure that the analysis report is submitted to the

Chief OORP, unless BSEE has designated a third party as provided in paragraph (c)(4) of this section, as well as the manufacturer. If you cannot complete the investigation and analysis within the specified time, you must submit an extension request detailing how you will complete the investigation and analysis to BSEE for approval. You must submit the extension request to the Chief, OORP.

(3) If the equipment manufacturer notifies you that it has changed the design of the equipment that failed or if you have changed operating or repair procedures as a result of a failure, then you must, within 30 days of such changes, report the design change or modified procedures in writing to the Chief OORP, unless BSEE has designated a third party as provided in paragraph (c)(4) of this section.

(4) Submit notices and reports to the Chief, Office of Offshore Regulatory Programs; Bureau of Safety and Environmental Enforcement; 45600 Woodland Road, Sterling, Virginia 20166. BSEE may designate a third party to receive the data and reports on behalf of BSEE. If BSEE designates a third party, you must submit the data and reports to the designated third party.

(d) If you plan to use a BOP stack manufactured after the effective date of this regulation, you must use one manufactured pursuant to an ANSI/API Spec. Q1 (as incorporated by reference in § 250.198) quality management system. Such quality management system must be certified by an entity that meets the requirements of ISO/IEC 17021-1 (as incorporated by reference in § 250.198).

(1) BSEE may consider accepting equipment manufactured under quality assurance programs other than ANSI/API Spec. Q1, provided you submit a request to the Chief, OORP for approval, containing relevant information about the alternative program.

(2) You must submit this request to the Chief, OORP; Bureau of Safety and Environmental Enforcement; 45600 Woodland Road, Sterling, Virginia 20166.

30. Amend § 250.731 by:

a. Removing paragraphs (d) and (f);

b. Redesignating existing paragraph (e) as (d); and

c. Revising paragraphs (a)(5) and (c) to read as follows:

§ 250.731 What information must I submit for BOP systems and system components?

* * * * *

You must submit:	Including:
(a) * * *	(5) Control system pressure and regulator settings needed to close each ram BOP under MASP as defined for the operation;
* * * * * * *	
(c) Certification by an independent third party,	Verification that: (1) Test data demonstrate the shear ram(s) will shear the drill pipe at the water depth as required in § 250.732; (2) The BOP was designed, tested, and maintained to perform under the maximum environmental and operational conditions anticipated to occur at the well; (3) The accumulator system has sufficient fluid to operate the BOP system without assistance from the charging system; and (4) If using a subsea BOP, a BOP in an HPHT environment as defined in § 250.804(b), or a surface BOP on a floating facility, the BOP has not been compromised or damaged from previous service.
* * * * * * *	

31. Revise § 250.732 and the section heading to read as follows:

§ 250.732 What are the independent third party requirements for BOP systems and system components?

(a) Prior to beginning any operation requiring the use of any BOP, you must submit verification by an independent third party and supporting documentation as required by this paragraph to the appropriate District Manager and Regional Supervisor.

You must submit verification and documentation related to:	**That:**
(1) Shear testing,	(i) Demonstrates that the BOP will shear the tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies such as heavy-weight pipe or collars), workstring, tubing and associated exterior control lines and any electric-, wire-, and slick-line to be used in the well;
	(ii) Demonstrates the use of test protocols and analysis that represent recognized engineering practices for ensuring the repeatability and reproducibility of the tests, and that the testing was performed by a facility that meets generally accepted quality assurance standards;
	(iii) Provides a reasonable representation of field applications, taking into consideration the physical and mechanical properties of the tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies such as heavy-weight pipe or collars), workstring, tubing and associated exterior control lines and any electric-, wire-, and slick-line to be used in the well;
	(iv) Ensures testing was performed on the outermost edges of the shearing blades of the shear ram;
	(v) Demonstrates the shearing capacity of the BOP equipment to the physical and mechanical properties of the tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies such as heavy-weight pipe or collars), workstring, tubing and associated exterior control lines and any electric-, wire-, and slick-line to be used in the well; and
	(vi) Includes relevant testing results.
(2) Pressure integrity testing for sealing components, and	(i) Shows that testing is conducted after the shearing is completed and prior to opening the component;
	(ii) Demonstrates that the equipment will seal at the rated working pressures (RWP) of the BOP for 5 minutes; and
	(iii) Includes all relevant test results.
(3) Calculations	Include shearing and sealing pressures for all pipe to be used in the well including corrections for MASP.

(b) The independent third-party must be a technical classification society, a licensed professional engineering firm, or a registered professional engineer capable of providing the required certifications and verifications.

(c) For wells in an HPHT environment, as defined by § 250.804(b), you must submit verification by an independent third party that it conducted a comprehensive review of the BOP system and related equipment you propose to use. You must provide the independent third party access to any facility associated with the BOP system or related equipment during the review process. You must submit the verifications required by this paragraph (c) to the appropriate District Manager and Regional Supervisor before you begin any operations in an HPHT environment with the proposed equipment.

You must submit:	**Including:**
(1) Verification that the independent third party conducted a detailed review of the design package to ensure that all critical components and systems meet recognized engineering practices,	
(2) Verification that the designs of individual components and the overall system have been proven in a testing process that demonstrates the performance and reliability of the equipment in a manner that is repeatable and reproducible,	(i) Identification of all reasonable potential modes of failure; and (ii) Evaluation of the design verification tests. The design verification tests must assess the equipment for the identified potential modes of failure.
(3) Verification that the BOP equipment will perform as designed in the temperature, pressure, and environment that will be encountered, and	
(4) Verification that the fabrication, manufacture, and assembly of individual components and the overall system uses recognized engineering practices and quality control and assurance mechanisms.	For the quality control and assurance mechanisms, complete material and quality controls over all contractors, subcontractors, distributors, and suppliers at every stage in the fabrication, manufacture, and assembly process.

(d) You must make all documentation that demonstrates compliance with the requirements of this section available to BSEE upon request.

32. Amend § 250.733 by:

a. Revising paragraphs (a)(1) and (b)(1); and

b. Adding paragraph (e) to read as follows:

§ 250.733 What are the requirements for a surface BOP stack?

(a) * * *

(1) The blind shear rams must be capable of shearing at any point along the tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies that include heavy-weight pipe or collars), workstring, tubing and associated exterior control lines, and any electric-, wire-, and slick-line that is in the hole and sealing the wellbore after shearing. Prior to April 29, 2021, if your blind shear rams are unable to cut any electric-, wire-, or slick-line under MASP as defined for the operation and seal the wellbore, you must use an alternative cutting device capable of shearing the lines before closing the BOP. This device must be available on the rig floor during operations that require their use.

* * * * *

(b) * * *

(1) On new floating production facilities installed after April 29, 2021, that include a surface BOP, follow the BOP requirements in § 250.734(a)(1).

* * * * *

(e) Additional requirements for surface BOP systems used in well-completion, workover, and decommissioning operations.

The minimum BOP system for well-completion, workover, and decommissioning operations must meet the appropriate standards from the following table:

When . . .	**The minimum BOP stack must include . . .**
(1) The expected pressure is less than 5,000 psi,	Three BOPs consisting of an annular, one set of pipe rams, and one set of blind-shear rams.
(2) The expected pressure is 5,000 psi or greater or you use multiple tubing strings,	Four BOPs consisting of an annular, two sets of pipe rams, and one set of blind-shear rams.
(3) You handle multiple tubing strings simultaneously,	Four BOPs consisting of an annular, one set of pipe rams, one set of dual pipe rams, and one set of blind-shear rams.

(4) You use a tapered drill pipe, work string, or tubing	At least one set of pipe rams that are capable of sealing around each size of drill pipe, work string, or tubing. If the expected pressure is greater than 5,000 psi, then you must have at least two sets of pipe rams that are capable of sealing around the larger size drill pipe, work string, or tubing. You may substitute one set of variable bore rams for two sets of pipe rams.
(5) You use a surface BOP on a floating facility,	The elements required by § 250.733(b)(1) of this part.

33. Amend § 250.734 by:

a. Removing paragraph (a)(6)(vi); and

b. Revising paragraphs (a)(1)(ii), (a)(3), (a)(4), (a)(6)(iv), (a)(6)(v), (a)(16), and (b) to read as follows:

§ 250.734 What are the requirements for a subsea BOP system?

(a) * * *

When operating with a subsea BOP system, you must:	Additional requirements
(1) * * *	(ii) Both shear rams must be capable of shearing at any point along the tubular body of any drill pipe (excluding tool joints, bottom-hole tools, and bottom hole assemblies such as heavy-weight pipe or collars), workstring, tubing and associated exterior control lines, appropriate area for the liner or casing landing string, shear sub on subsea test tree, and any electric-, wire-, slick-line in the hole; under MASP. At least one shear ram must be capable of sealing the wellbore after shearing under MASP conditions as defined for the operation. Any non-sealing shear ram(s) must be installed below a sealing shear ram(s).
* * * * * * *	
(3) Have the accumulator capacity, to provide fast closure of the BOP components and to operate all critical functions;	The accumulator capacity must: (i) Close each required shear ram, ram locks, one pipe ram, and disconnect the LMRP. (ii) Have the capability to perform ROV functions within the required times outlined in API Standard 53 with ROV or flying leads. (iii) Have bottles located subsea for the autoshear and deadman (which may be shared between those two systems) to secure the wellbore. These bottles may also be utilized to perform the secondary control system functions (*e.g.*, ROV or acoustic functions). (iv) Perform under MASP conditions as defined for the operation.
(4) * * *	You must have the ROV intervention capability to close each shear ram, ram locks, one pipe ram, and disconnect the LMRP under MASP conditions as defined for the operation. You must be capable of performing these functions in the response times outlined in API Standard 53 (as incorporated by reference in § 250.198). The ROV

	panels on the BOP and LMRP must be compliant with API RP 17H (as incorporated by reference in § 250.198).
* * * * * * *	
(6) * * *	(iv) Autoshear/deadman functions and an EDS mode must close, at a minimum, two shear rams in sequence and be capable of performing their expected shearing and sealing action under MASP conditions as defined for the operation.
	(v) Your sequencing must allow a sufficient delay when closing your two shear rams in order to provide maximum sealing efficiency.
* * * * * * *	
(16) Use a BOP system that has the following mechanisms and capabilities;	(i) No later than May 1, 2023, you must have the capability to position the entire pipe completely within the area of the shearing blade. This capability cannot be a separate ram BOP or annular preventer, but you may use those during a planned shear. (ii) If your control pods contain a subsea electronic module with batteries, a mechanism for personnel on the rig to monitor the state of charge of the subsea electronic module batteries in the BOP control pods.

(b) If you suspend operations to make repairs to any part of the subsea BOP system, you must stop operations at a safe downhole location. Before resuming operations you must:

(1) Submit a revised permit with a written statement from an independent third party documenting the repairs and certifying that the previous certification in § 250.731(c) remains valid;

(2) Upon relatch of the BOP, perform an initial subsea BOP test in accordance with § 250.737(d)(4), including deadman in accordance with § 250.737(d)(12)(vi). If repairs take longer than 30 days, once the BOP is on deck, you must test in accordance with the requirements of § 250.737;

(3) Upon relatch of the LMRP, you must test according to the following:

(i) Pressure test riser connector/gasket in accordance with § 250.737(b) and (c);

(ii) Pressure test choke and kill stabs at LMRP/BOP interface in accordance with § 250.737(b) and (c);

(iii) Full function test of both pods and both control panels;

(iv) Verify acoustic pod communication (if equipped); and

(v) Deadman test with pressure test in accordance with § 250.737(d)(12)(vi).

(4) Receive approval from the District Manager.

* * * * *

34. Amend § 250.735 by revising paragraph (a) to read as follows:

§ 250.735 What associated systems and related equipment must all BOP systems include?

* * * * *

(a) An accumulator system (as specified in API Standard 53, incorporated by reference in § 250.198). Your accumulator system must have the fluid volume capacity and appropriate pre-charge pressures in accordance with API Standard 53. If you supply the accumulator regulators by rig air and do not have a secondary source of pneumatic supply, you must equip the regulators with manual overrides or other devices to ensure capability of hydraulic operations if rig air is lost;

* * * * *

35. Amend § 250.736 by revising paragraph (d)(5) to read as follows:

§ 250.736 What are the requirements for choke manifolds, kelly-type valves inside BOPs, and drill string safety valves?

* * * * *

(d) * * *

(5) When running casing, a safety valve in the open position available on the rig floor to fit the casing string being run in the hole. For subsea BOPs, the safety valve must be available on the rig floor if the length of casing being run exceeds the water depth, which would result in the

casing being across the BOP stack and the rig floor prior to crossing over to the drill pipe running string;

* * * * *

36. Amend § 250.737 by:

a. Redesignating existing paragraph (a)(4) as (a)(5),

b. Adding new paragraph (a)(4),

c. Removing paragraph (d)(4)(vi),

d. Adding paragraph (d)(13), and

e. Revising paragraphs (b) introductory text, (b)(2), (b)(3), (c), (d)(2)(ii), (d)(3)(iii), (d)(3)(iv), (d)(3)(v), (d)(4)(i), (d)(4)(iii), (d)(4)(v), (d)(5), (d)(10), (d)(12)(iv), and (d)(12)(vi) to read as follows:

§ 250.737 What are the BOP system testing requirements?

* * * * *

(a) * * *

(4) In lieu of meeting the schedule established in paragraph (a)(2) of this section, you may request that BSEE approve a 21-day BOP testing frequency. To obtain BSEE approval, you must submit a request to the appropriate BSEE Regional Supervisor, District Field Operations. Your request must demonstrate that you have developed a BOP health monitoring plan that includes certain system capabilities. As long as your plan is consistent with recognized engineering and industry practice, BSEE will approve your request if it includes the following:

(i) Condition monitoring tools, including continuous surveillance of sensor readings from the BOP control system, real-time condition analysis and displays, functional pressure signal analysis, historical sensor data;

(ii) Failure propagation analysis;

(iii) A failure tracking and resolution system that includes detailed failure reports and identification of recurring problems; and

(iv) Submission of quarterly reports of the data collected pursuant to paragraphs (a)(4)(i)(iii) to the BSEE Regional Supervisor, District Field Operations.

* * * * *

(b) Pressure test procedures. When you pressure test the BOP system, you must conduct a low-pressure test and a high-pressure test for each BOP component (excluding test rams and non-sealing shear rams). You must begin each test by conducting the low-pressure test then transition to the high-pressure test. Each individual pressure test must hold pressure long enough to demonstrate the tested component(s) holds the required pressure. The table in this paragraph (b) outlines your pressure test requirements.

* * * * *

You must conduct a . . .	According to the following procedures . . .
* * * * * * *	
(2) High-pressure test for blind shear ram-type BOPs, ram-type BOPs, the choke manifold, outside of all choke and kill side outlet valves (and annular gas bleed valves for subsea BOP), inside of all choke and kill side outlet valves below uppermost ram, and other BOP components	(i) The high-pressure test must equal the RWP of the equipment or be 500 psi greater than your calculated MASP, as defined for the operation for the applicable section of hole. Before you may test BOP equipment to the MASP plus 500 psi, the District Manager must have approved those test pressures in your permit. (ii) The blind shear ram (BSR) must be tested to:

	(A) MASP plus 500 psi for the hole section to which it is exposed; or (B) Full well MASP plus 500 psi on initial latch up and all subsequent BSR pressure tests can be done to the casing/liner test pressure for the applicable hole section. (iii) The choke and kill side outlet valves must be tested to, except as provided in paragraph (d)(13) of this section: (A) MASP plus 500 psi for the hole section to which it is exposed; or (B) Full well MASP plus 500 psi on initial latch up and all subsequent pressure tests can be done to the casing/liner test pressure for the applicable hole section.
(3) High-pressure test for annular-type BOPs, inside of choke or kill valves (and annular gas bleed valves for subsea BOP) above the uppermost ram BOP	The high pressure test must equal 70 percent of the RWP of the equipment or be 500 psi greater than your calculated MASP, as defined for the operation for the applicable section of hole. Before you may test BOP equipment to the MASP plus 500 psi, the District Manager must have approved those test pressures in your APD or APM.
* * * * * * *	

(c) Duration of pressure test. Each test must hold the required pressure for 5 minutes, which must be recorded on a chart not exceeding 4 hours, or on a digital recorder. However, for surface BOP systems and surface equipment of a subsea BOP system, a 3-minute test duration is acceptable if recorded on a chart not exceeding 4 hours, or on a digital recorder. The recorded test pressures must be within the middle half of the chart range, *i.e.*, cannot be within the lower or upper one-fourth of the chart range. If the equipment does not hold the required pressure during a test, you must correct the problem and retest the affected component(s).

* * * * *

(d) * * *

You must…	Additional requirements…
* * * * * * *	
(2) * * *	(ii) Contact the District Manager at least 72 hours prior to beginning the initial test to allow BSEE representative(s) to witness testing.

(3) * * *	(iii) Contact the District Manager at least 72 hours prior to beginning the stump test to allow BSEE representative(s) to witness testing.
	(iv) You must verify closure of all ROV intervention functions on your subsea BOP stack during the stump test.
	(v) You must follow paragraphs (b) and (c) of this section. Pressure testing of each ram and annular component is only required once.
(4) * * *	(i) You must begin the initial subsea BOP test on the seafloor within 30 days of the stump test.
* * * * * * *	
	(iii) You must pressure test well-control rams and annulars according to paragraphs (b) and (c) of this section.
* * * * * * *	
	(v) You must test and verify closure of at least one set of rams during the initial subsea test through a ROV hot stab. You must confirm closure of the selected ram through the ROV hot stab with a 1,000 psi pressure test for 5 minutes.
(5) Alternate tests between control stations	(i) For two complete BOP control stations you must: (A) Designate a primary and secondary station; (B) Alternate testing between the primary and secondary control stations on a weekly basis; and (C) For a subsea BOP, develop an alternating testing schedule to ensure the primary and secondary control stations will function each pod. (ii) Remote panels where all BOP functions are not included (*e.g.*, life boat panels) must be function-tested upon the initial BOP tests.
* * * * * * *	
(10) * * *	If BSEE approves your request to utilize a 21-day BOP test frequency pursuant to § 250.737(a)(4), you may function test shear ram(s) BOPs every 21 days in accordance with the terms of that approval.
* * * * * * *	
(12) * * *	(iv) Following the deadman system test on the seafloor you must document the final remaining pressure of the subsea accumulator system.
* * * * * * *	
	(vi) You must confirm closure of the BSR(s) with a 1,000 psi pressure test for 5 minutes.
* * * * * * *	
(13) Pressure test the choke and kill side outlet valves	According to paragraph (b), except as follows: (i) Test the wellbore side of the choke and kill side outlet valves above the uppermost pipe ram to the approved annular test pressure. Choke and kill side outlet valves below the uppermost pipe ram must be tested to MASP plus 500 psi for the applicable hole section. (ii) For the 30 day BSR testing, test the wellbore side of the choke and kill side outlet valves between the upper most pipe ram and the upper most ram, to the casing/liner test pressure or annular test pressure, whichever is greater.

	(iii) For BOPs with only one choke and kill side outlet valve, you are only required to pressure test the choke and kill side outlet valves from the wellbore side.

* * * * *

37. Amend § 250.738 by revising paragraphs (b) introductory language, (b)(3), (b)(4), (f), (i), (m), and (o) to read as follows:

§ 250.738 What must I do in certain situations involving BOP equipment or systems?

* * * * *

If you encounter the following situation:	Then you must . . .
(b) Need to repair, replace, or reconfigure a surface BOP or subsea BOP system;	
* * * * * * *	
	(3) Submit a revised permit with a written statement from an independent third party documenting the repairs, replacement, or reconfiguration and certifying that the previous certification under § 250.731(c) remains valid.
	(4) You must receive approval from the District Manager prior to resuming operations.
* * * * * * *	
(f) Plan to install casing rams or casing shear rams in a surface BOP stack;	Before running casing, perform a shell test to the permit approved test pressure of the BOP component above the casing ram/casing shear. If this installation was not included in your approved permit, and changes the BOP configuration approved in the APD or APM, you must notify and receive approval from the District Manager.
* * * * * * *	
(i) You activate any shear ram and pipe or casing is sheared;	Retrieve, physically inspect, and conduct a full pressure test of the BOP stack after the situation is fully controlled. You must submit to the District Manager a report from an independent third party certifying that the BOP is fit to return to service.
* * * * * * *	
(m) Plan to utilize any other circulating or ancillary equipment (*e.g.*, but not limited to, subsea isolation device, subsea accumulator module, or gas handler) that is in addition to the equipment required in this subpart;	Contact the District Manager and request approval in your APD or APM. Your request must include a report from an independent third party on the equipment's design and suitability for its intended use as well as any other information required by the District Manager. The District Manager may impose any conditions regarding the equipment's capabilities, operation, and testing.
* * * * * * *	

(o) You install redundant components for well control in your BOP system that are in addition to the required components of this subpart (*e.g*., pipe/variable bore rams, shear rams, annular preventers, gas bleed lines, and choke/kill side outlets or lines);	Comply with all testing, maintenance, and inspection requirements in this subpart that are applicable to those well-control components. If any redundant component fails a test, you must submit a report from an independent third party that describes the failure and confirms that there is no impact on the BOP that will make it unfit for well-control purposes. You must submit this report to the District Manager and receive approval before resuming operations. The District Manager may require you to provide additional information as needed to clarify or evaluate your report.
* * * * * * *	

38. Amend § 250.739 by revising paragraph (b) introductory text to read as follows:

§ 250.739 What are the BOP maintenance and inspection requirements?

* * * * *

(b) A major, detailed inspection of the well control system components (including but not limited to riser, BOP, LMRP, and control pods) must be performed every 5 years. This major inspection may be performed in phased intervals. You must track and document all system and component inspection dates. These records must be available on the rig. An independent third party is required to review the inspection results and must compile a detailed report of the inspection results, including descriptions of any problems and how they were corrected. You must make these reports available to BSEE upon request. This major inspection must be performed every 5 years from the following applicable dates, whichever is later:

* * * * *

39. Add § 250.750 and undesignated center heading to read as follows:

COILED TUBING OPERATIONS

§ 250.750 What are the coiled tubing requirements?

(a) For coiled tubing operations, you must follow the applicable requirements of this subpart and you must meet the following minimum requirements for the BOP system:

(1) BOP system components must be in the following order from the top down:

BOP system when expected surface pressures are less than or equal to 3,500 psi	BOP system when expected surface pressures are greater than 3,500 psi	BOP system for wells with returns taken through an outlet on the BOP stack
(i) Stripper or annular-type well control component	Stripper or annular-type well control component	Stripper or annular-type well control component.
(ii) Hydraulically-operated blind rams	Hydraulically-operated blind rams	Hydraulically-operated blind rams.
(iii) Hydraulically-operated shear rams	Hydraulically-operated shear rams	Hydraulically-operated shear rams.
(iv) Kill line inlet	Kill line inlet	Kill line inlet.
(v) Hydraulically-operated two-way slip rams	Hydraulically-operated two-way slip rams	Hydraulically-operated two-way slip rams. Hydraulically-operated pipe rams.
(vi) Hydraulically-operated pipe rams	Hydraulically-operated pipe rams Hydraulically-operated blind-shear rams. These rams should be located as close to the tree as practical	A flow tee or cross. Hydraulically-operated pipe rams. Hydraulically-operated blind-shear rams on wells with surface pressures >3,500 psi. As an option, the pipe rams can be placed below the blind-shear rams. The blind-shear rams should be located as close to the tree as practical.

(2) You may use a set of hydraulically-operated combination rams for the blind rams and shear rams.

(3) You may use a set of hydraulically-operated combination rams for the hydraulic two-way slip rams and the hydraulically-operated pipe rams.

(4) You must attach a dual check valve assembly to the coiled tubing connector at the downhole end of the coiled tubing string for all coiled tubing operations. If you plan to conduct operations without downhole check valves, you must describe alternate procedures and equipment in Form BSEE-0124, Application for Permit to Modify and have it approved by the District Manager.

(5) You must have a kill line and a separate choke line. You must equip each line with two full-opening valves and at least one of the valves must be remotely controlled. You may use a

manual valve instead of the remotely controlled valve on the kill line if you install a check valve between the two full-opening manual valves and the pump or manifold. The valves must have a working pressure rating equal to or greater than the working pressure rating of the connection to which they are attached, and you must install them between the well control stack and the choke or kill line. For operations with expected surface pressures greater than 3,500 psi, the kill line must be connected to a pump or manifold. You must not use the kill line inlet on the BOP stack for taking fluid returns from the wellbore.

(6) You must have a hydraulic-actuating system that provides sufficient accumulator capacity to close-open-close each component in the BOP stack. This cycle must be completed with at least 200 psi above the pre-charge pressure, without assistance from a charging system.

(7) All connections used in the surface BOP system from the tree to the uppermost required ram must be flanged, including the connections between the well control stack and the first full-opening valve on the choke line and the kill line.

(b) BSEE considers all coiled tubing operations to be non-routine.

40. Add § 250.751 to read as follows:

§ 250.751 Coiled tubing testing requirements.

You must test the coiled tubing unit in accordance with § 250.737(a), (b), (c), (d)(9), and (d)(10). You must successfully pressure test the dual check valves to the rated working pressure of the connector, the rated working pressure of the dual check valve, expected surface pressure, or the collapse pressure of the coiled tubing, whichever is less. The test interval for coiled tubing operations must include a 10 minute high-pressure test for the coiled tubing string.

41. Add § 250.760 and undesignated center heading to read as follows:

SNUBBING OPERATIONS

§ 250.760 What are the snubbing requirements?

(a) For snubbing operations, you must follow the applicable requirements of this subpart and have the following minimum BOP-system components:

(1) One set of pipe rams hydraulically operated,

(2) Two sets of stripper-type pipe rams hydraulically operated with spacer spool,

(3) An inside BOP or a spring-loaded, back-pressure safety valve in the open position located on the rig floor, and

(4) An essentially full-opening, work-string safety valve in the open position must be maintained on the rig floor at all times and a wrench to fit the work-string safety valve must be readily available.

(5) Proper connections must be readily available for inserting valves in the work string.

(b) Test the snubbing unit in accordance with § 250.737(a), (b), and (c)

Subpart Q—Decommissioning Activities

42. Amend § 250.1703 by revising paragraph (b) to read as follows:

§ 250.1703 What are the general requirements for decommissioning?

*   *   *   *   *

(b) Permanently plug all wells. Packers and bridge plugs used as qualified mechanical barriers must comply with ANSI/API Spec. 11D1 (as incorporated by reference in § 250.198). You must have two independent barriers, one being an ANSI/API Spec. 11D1 qualified mechanical barrier, in the exposed center wellbore prior to removing the tree and/or well control equipment;

*   *   *   *   *

43. Amend § 250.1704 by adding paragraph (g)(4) and revising paragraph (h)(2) to read as follows:

§ 250.1704 What decommissioning applications and reports must I submit and when must I submit them?

* * * * *

Decommissioning applications and reports	When to submit	Instructions
* * * * * * *		
(g) * * *	(4) Within 30 days after you complete site clearance verification activities,	Include information required under § 250.1743(a).
(h) * * *	(2) Within 30 days after completion of decommissioning activity,	Include information required under §§ 250.1712 and 250.1721.
* * * * * * *		

44. Remove and reserve § 250.1706:

§ 250.1706 [Reserved]

45. Remove and reserve § 250.1713:

§ 250.1713 [Reserved]

46. Amend § 250.1716 by revising paragraph (b)(3) to read as follows:

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

* * * * *

(b) * * *

(3) The water depth is greater than 1,000 feet.

47. Amend § 250.1722 by revising paragraph (d) introductory text to read as follows:

§ 250.1722 If I install a subsea protective device, what requirements must I meet?

*   *   *   *   *

(d) Within 30 days after you complete the trawling test described in paragraph (c) of this section, submit a report to the appropriate District Manager using form BSEE-0125, End of Operations Report (EOR) that includes the following:

*   *   *   *   *