



Peer Review Plan

Date: October 31, 2023

BSEE Funding Source or Author's Division: Office of Offshore Regulatory Programs
Emerging Technologies
Branch 45600 Woodland Road
Sterling, VA 20166

Title: EVALUATION OF TECHNOLOGY ASSESSMENT PROGRAM (TAP) 764 -
SUBSEA BOP STACK SHEAR/SEAL CAPABILITY MODELING TOOL

Subject and Purpose: The subject of this study is to peer review the research "SUBSEA BOP STACK SHEAR/SEAL CAPABILITY MODELING TOOL." This peer review aims to verify the scientific and technical merit of the assumptions, inputs, methodologies, and results of the research conducted.

Under contract to the Bureau of Safety and Environmental Enforcement (BSEE), Southwest Research Institute (SwRI) conducted a project to develop a validated methodology for computing the forces acting on BOP blind shear rams using commercially available software packages. The overarching objective for this project was to provide a tool that will allow BSEE to reliably assess BOP ram force requirements under potential flowing conditions.

This project is to peer review the findings and deliverables of the work performed in the original contract.

Impact of Dissemination: BSEE considers this study influential scientific information, which requires a robust evaluation that the scientific community and stakeholders will accept. This study's findings may directly impact the methods, industry standards, best practices, and material selection for equipment utilized for high pressure and high temperature offshore oil and gas operations. This study's results may suggest the need to revise respective industry standards and could affect how BSEE and industry interpret those standards. The results from this study are essential for the review of new projects in deeper waters for offshore operations.

Upon conclusion of the peer review, BSEE will post all possible contracted deliverables, tasks, data, analyses, and information, including the peer-review reporting, reports, and comments on BSEE's research records website: <https://www.bsee.gov/research-record>.

Timing of Review: August 2023 – August 2024 (Total peer review process of not more than 13 months is desired for this project.)

Disclaimer: The content of this peer review plan has been verified in compliance with the peer review handbook. For peer review contracts executed prior to peer review plan release, there may be differences in language used between the peer review plan and the executed contract.



Manner of Review, Selection of Reviewers, and Nomination Process:

This peer review shall be conducted through the contract BSEE BPA Process. This process will provide for a panel of qualified subject matter experts (SMEs) selected by the agency in order to achieve an optimum level of expertise across the spectrum of issues. The SMEs will be required to maintain both balance and independence while minimizing any potential conflicts of interest. The public will not be consulted in the nomination of potential peer reviewers.

Primary criteria for peer reviewers include the following:

- Petroleum Engineering, materials engineering, mechanical engineering, etc.
- Practical experience and knowledge specific to the evaluated technology with expertise in subsea blowout preventers (BOPs).
- Practical experience and knowledge specific to BOP rams, blowout prevention, hydrodynamics, computational simulations, etc.

The secondary tier of criteria should include the following:

- No more than two persons from the oil and gas industry
- At least one from outside of the oil and gas industry

Reviewers may be selected from academia, industry, and federal government. The group of reviewers shall not include multiple reviewers from the same affiliation and shall strive to include various perspectives on the issue considered.

Expected Number of Reviewers:

Three reviewers, plus contractor oversight and writing personnel.

Requisite Expertise:

- Subject Matter Experts with five years of experience in a relevant field and should also have some other strong credentials, e.g., a Ph.D. with a substantial publication or patent record specific to the evaluated technology, a young investigator award, or a strong pedigree (e.g., a Ph.D. from a high caliber institution or under a recognized leader in the field).
- Publications and Patents. Qualified experts often have many peer-reviewed journals and/or patents on the evaluated technology.
- Other evidence is that the person is a recognized expert in the field. Qualified experts have often managed a public policy program that has had a national impact, has a record of bringing innovations to the market or holds vital patents.
- In a relevant field, an advanced degree - Ph.D., Sc.D., D.Eng., MS, or MBA. Experts with only a bachelor's degree should have other experience and or a record of significant accomplishments indicating their expertise.

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- Relevant awards. Qualified experts may have received a prestigious award such as the National Medal of Science, American Chemical Society National Award, Young Investigator Award, R&D 100 Award, or other awards specific to technology (e.g., Fuel Cell Seminar Award).
- Key Society Membership. Qualified experts may be members of a society like the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), the American Physics Society, a National Laboratory Fellow, etc.

Opportunity for Public Comment:

At the time of this peer review plan's posting, the research report will be available on BSEE's Peer Review Public Posting website located here: <https://www.bsee.gov/what-we-do/research/peer-review>. BSEE welcomes public comment, especially from those with experience with tension leg platforms. BSEE invites the public to comment within the 30-day window indicated on the website through the process described below, which is consistent with the guidance on the website:

- For comments pertaining to this peer review plan, send emails to: bsee_peerreviewplancomments@bsee.gov
- For comments pertaining to the research, send emails to: bsee_researchpubliccomment@bsee.gov

In the subject line list of a public comment email, please state: "TAP 764 - SUBSEA BOP STACK SHEAR/SEAL CAPABILITY MODELING TOOL" + the words "peer review plan" or "research" + the words "public comment."

- List out any comments, questions, feedback by number (ex. 1, 2, 3, etc.)
- If referencing any sources of published information, please list the complete source information in a recognized reference format (such as APA)
- Please include your name, contact information, and affiliation

The agency will provide public comments deemed significant and relevant to the peer reviewers to address during their review.

Agency Contact: Nathan Good

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