RECOMMENDED MODERNIZATION OF REFERENCED STANDARDS IN BSEE CFR

ISSUE DATE: September 28, 2020 – Rev. 0

Disclaimer
The materials generated for this Document, inclusive of the appendices, were generated from a volunteer effort within the OOC Referenced Standards Workgroup. These materials drew upon lessons learned from multiple operators and contractors. Each operator or entity is solely responsible for verification and modification of these materials for their organization's needs prior to use. The OOC, its staff and all of the contributing volunteers assume no liability for the content or use of the produced materials.
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1 Overview

The objective of the *Recommended Modernization of Referenced Standards in BSEE CFR* is to:

1. Increase knowledge among operating companies about which standards are referenced by the Code of Federal Regulations, 30 CFR 250.198, (CFR)
2. Review the standards currently referred in the CFRs
3. Identify with industry SMEs which standards are due for rapid updating in the CFR and which standards are due for update after sufficient review

This process will allow BSEE to understand the most important referenced standards in the CFR which need removing, updating, or adding based on the assessment from the OOC Workgroup. Often, operating companies must request alternative compliance to the regulations because the currently referenced standards are out-of-date.

Currently the BSEE regulatory text contains 125 referenced standards. BSEE recognizes that a number of these references are out-of-date, (for example not the latest edition is incorporated, or outdated standards that are withdrawn by the standard setting organizations are referenced). Due to the lengthy rule making process such problem persists. Hence, BSEE and the OOC have engaged volunteer subject matter experts (SMEs) to provide feedback on the most important standard references to be updated and added through incorporation by reference into the CFR. Reasons these standard references within regulations need to be reviewed include:

A. Standard incorporated by reference are out of date
B. Technologies have evolved and the incorporated by reference standard no longer reflects the current available technology
C. Lessons learned from usage of the older standard show that the standard is no longer up-to-date, and the newer edition should be used
D. Standard was withdrawn by standard setting organizations and replaced by newer standard
E. Standard organizations have released new standards that reflect current technologies and practices
F. All of the above reasons could require operators to receive approval for alternate compliance to the regulations to maintain the highest level of safety

1.1 BSEE Rule Making Process

As BSEE noted in their presentation at the January 29, 2020 workshop, BSEE is prohibited under applicable rules governing incorporation by reference from automatically incorporating future amendments to or editions of a standard. The Federal Register requires incorporation of a specific, dated edition into the Code of Federal Regulations (1CFR 51.9).

BSEE's use of standards are coordinated through the Standards Development Section in Houston, BSEE subject matter experts, and the Regulations Development Section. The use of standards is mandated by the National Technology Transfer and Advancement Act.

Regulation §250.115 establishes the general expectation for compliance with incorporated documents and defines the procedures for incorporation of documents by reference. Regulation §250.198 lists all the standards that are incorporated and identifies the CFR section where they are referenced.

BSEE may:

A. Incorporate the standard in its entirety
B. Incorporate certain sections or parts of a standard, or
C. Intentionally incorporate a previous edition
To update the standard, any changes to an incorporation by reference requires rulemaking action (as required by the Administrative Procedure Act).

**Option 1**: Update by direct final rule which allows BSEE to publish a final rule without the proposed rule process.

A. § 250.115(b): BSEE may make the rule amending the document effective without prior opportunity for public comment when BSEE determines:
   1. That the revisions to a 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.

   1. to interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice; or
   2. when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest

Option 1 is typically a shorter process (approximately 6 months) and is typically used for updating out-of-date documents incorporated by reference to the current editions. In general, this can be accomplished if the changes between the incorporated document and the newer edition are not significant. It is also used when there are critical needs for environmental and personnel safety.

**Option 2**: Update through notice and comment rulemaking process (proposed rule, public comment, and final rule). This complete rulemaking process requires:

1. Publication of a notice of proposed rulemaking
2. Public comment period
3. Evaluation and response to public comments
4. Publication of a final rule

Option 2 is a much longer process which takes at least 1 to 2 years and is usually used for documents not currently incorporated by reference (i.e. new to BSEE regulations) and when there are significant differences between the incorporated document and the updated edition.

**Additional Options**: BSEE regulations allow for an alternative approach:

A. § 250.115(d): Under §§250.141 and 250.142, you may comply with a later edition of a specific document incorporated by reference, provided:
   1. It can be shown 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. Prior written approval for alternative compliance from the authorized BSEE official can be obtained

This allows operators to request compliance with a newer edition on a case-by-case basis.

The currently referenced standards in the BSEE CFR are listed in Appendix A.
1.2 Process
To solicit SME involvement from a wide variety of backgrounds, this process included multiple stakeholders including BSEE, leaseholders, service companies, consultants, and trade organizations.

To accomplish these goals, the following process was developed:

1. Stakeholder Workshop
2. Draft document produced
3. Broad SME input to draft document #1
4. OOC Referenced Standards Workgroup review of survey results and revised draft document #1
5. Broad SME comment to draft document #2
6. OOC Referenced Standards Workgroup review of input and produce final Recommended Modernization of Referenced Standards in BSEE CFR document
7. Final document issued for use by stakeholders
2 Stakeholder Workshop
The Stakeholder Workshop was held on January 29, 2020 in The Woodlands, TX. This workshop focused on input from operating companies on which standards referenced in the CFR are most important to update, to remove and to add. This workshop was the beginning of a comprehensive process such that the final report submitted to BSEE would encompass feedback from multiple and diverse group of volunteer stakeholders.

2.1 Workshop Planning Committee
The Referenced Standards Workshop would not have been possible without the efforts of the planning committee. This planning committee was responsible for the development of the agenda, pre-event surveys and facilitation during the event.

Table 1: Workshop Planning Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alton Payne, BSEE</td>
<td>Holly Hopkins, API</td>
</tr>
<tr>
<td>Angie Barbara, OOC</td>
<td>Julian Pham, BSEE</td>
</tr>
<tr>
<td>Brian Skeels, TechnipFMC</td>
<td>Kirk Malstrom, BSEE</td>
</tr>
<tr>
<td>Evan Zimmerman, OOC</td>
<td>Roland Goodman, API</td>
</tr>
<tr>
<td>Greg Kusinski, Chevron</td>
<td>Stephanie Kusinski, OOC</td>
</tr>
</tbody>
</table>

2.2 Workshop Agenda
The Workshop allowed the attendees to understand the importance and the objectives of the Stakeholder Workshop and the subsequent process. BSEE provided a comprehensive review of the rule making process to all attendees. Next, the participants were placed into small breakout groups in which they actively identified and discussed which standards they felt were the most important to incorporate by reference in order to increase safety and efficiency offshore. This included currently referenced standards as well as ones which are not currently referenced. The groups identified the standard and edition and captured one or more bullet points on why this reference should be discussed.

After the breakout groups finished discussion, they reported out to the full group. These standards were compiled, and each attendee was given 10 voting stickers to rank the priority of each standard that was discussed. The final votes were tallied and after further discussion amongst the entire group, the final consensus from the broad Stakeholder Workshop were included in the first draft of the Recommended Modernization of Referenced Standards in BSEE CFR document.

8:00 - 8:30 Registration
8:30 - 8:45 Introduction & Safety Brief
8:45 - 9:15 Workshop Objective & Referenced Standards Overview
9:15 - 9:30 Breakout Group Instructions
9:30 – 9:45 BREAK
9:45 - 10:30 Breakout Group Session 1 (Focus: Updates to already referenced standards)
10:30 – 10:45 BREAK & Switch table make up
10:45 - 11:30 Breakout Group Session 2 (Focus: New standards not currently referenced)
11:30 - 12:15 Lunch
12:15 - 1:00 Breakout Group Reports (review findings)
1:00 - 1:30 Individual Reference Ranking Exercise
1:30 - 1:45 Break
1:45 - 2:30 Summary Panel (BSEE, OOC, API, Industry)
2:30 - 3:00 Next Steps & Adjourn
2.3 Workshop Attendance
The following representatives registered and attended the SME Referenced Standards Workshop

Table 2: Stakeholder Workshop Attendance

<table>
<thead>
<tr>
<th>Name and Company</th>
<th>Name and Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alton Payne, BSEE</td>
<td>Julian Pham, BSEE</td>
</tr>
<tr>
<td>Anthony Cannata, Tanks A Lot, LLC</td>
<td>Kirk Malstrom, BSEE</td>
</tr>
<tr>
<td>Beth Atwood, BP</td>
<td>Matthew Douglas, J Connor Consulting</td>
</tr>
<tr>
<td>Brandy Huynh ( Harrington), COS</td>
<td>Melissa Sassella, Talos Energy Inc.</td>
</tr>
<tr>
<td>Brian Skeels, TechnipFMC</td>
<td>Michael Fouchi, Chevron</td>
</tr>
<tr>
<td>Daniel Hamilton, Williams</td>
<td>Natalie Schumann, Castex Offshore, Inc.</td>
</tr>
<tr>
<td>Erik Case, ExxonMobil Corporation</td>
<td>Paul Hansen, Chevron</td>
</tr>
<tr>
<td>Evan Zimmerman, OOC</td>
<td>Paul Landry, LLOG Exploration Co.</td>
</tr>
<tr>
<td>Frank Gallander, Chevron USA Inc</td>
<td>Roland Goodman, API</td>
</tr>
<tr>
<td>Frank Sanclementi, Hess</td>
<td>Senthil Chidambaram, ABS</td>
</tr>
<tr>
<td>Fred Brink, BSEE</td>
<td>Stephanie Kusinski, OOC</td>
</tr>
<tr>
<td>Greg Kusinski, Chevron</td>
<td>Steve Champagne, Talos Energy</td>
</tr>
<tr>
<td>Gregg Walz, Occidental Petroleum</td>
<td>Steve Frantz, Arena Offshore, LP</td>
</tr>
<tr>
<td>Holly Hopkins, API</td>
<td>Thad Dunham, IADC</td>
</tr>
<tr>
<td>Jeff Camp, K Camp &amp; Associates</td>
<td>Wanda Parker, WJP Enterprises</td>
</tr>
<tr>
<td>Joshua Wilson, Chevron</td>
<td></td>
</tr>
</tbody>
</table>

2.4 Workshop Output
During the Referenced Standards Workshop, several new editions and standards were identified as needing to be updated, to be removed or to be added to the CFR. The attendees then applied a relative opinion vote on the urgency of proper CFR Reference. This voting exercise resulted in additional discussion on several standards which may need further clarification or additional work by industry and BSEE before recommending it for referencing. A preliminary list of standards was established for further discussion.

Next, the preliminary list of standards (Draft document #1) were included in a wide industry/BSEE stakeholder survey for ranking.
3 Broad SME and Stakeholder Input to Draft Document #1
Draft document #1 was issued and reviewed by industry SMEs between February – June 2020. During this time, a comment period was open for 45 days for additional input and suggested changes. Comments were submitted via an OOC hosted survey.

OOC received 162 responses during this comment period. These comments were consolidated and organized by OOC staff and the prepared information was sent to the OOC Referenced Standards Workgroup for review. The responses included:

A. 50 entries from operators
B. 10 entries from government agencies
C. 80 entries from service companies
D. 22 entries from consultants
4 OOC Referenced Standards Workgroup Meetings

In July 2020, the OOC Referenced Standards Workgroup was formed. This Workgroup met over a series of four meetings between July – August 2020 to review the additional input and suggested changes by the industry SMEs and to create a second draft document.

The objective of the meetings was to:

1. Review each broad SME recommended standard, the reason, and the suggested priority level
2. Utilize collective SME judgement to summarize the overall SME recommendation, reason, and priority
3. Discuss as a group and come to consensus position on how to update and finalize the output report

To accomplish the objective, the Workgroup followed the below listed process:

1. First Pass Consensus. Clear consensus documents identified. If consensus could not be quickly reached, the standard was put on a list to discuss further
2. Second Pass Consensus where the Workgroup discussed
   a. Standards that need further discussion
   b. Standards that need additional context
3. Document the updated standards – grouped into three lists
   a. Standards to be documented in output report
   b. Standards that should be considered next year
   c. Standards that should not be referenced at this time
4. Draft the Output Report

4.1 Referenced Standards Workgroup Roster

Referenced Standard Workgroup participants are listed in Table 3.

<table>
<thead>
<tr>
<th>Referenced Standards Workgroup Roster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Kusinski, Chevron (Chair)</td>
</tr>
<tr>
<td>Brian Skeels, TechnipFMC (Co-Chair)</td>
</tr>
<tr>
<td>Aravind Nair, DNV GL</td>
</tr>
<tr>
<td>Ben Parker, DNV GL</td>
</tr>
<tr>
<td>Bill Taylor, UL</td>
</tr>
<tr>
<td>Charlie Shull, Shell</td>
</tr>
<tr>
<td>Chong Sun Ngen, Murphy</td>
</tr>
<tr>
<td>Evan Zimmerman, OOC</td>
</tr>
<tr>
<td>Holly Hopkins, API</td>
</tr>
<tr>
<td>Jason Boutelis, UL</td>
</tr>
<tr>
<td>Jerilyn Merrill, UL</td>
</tr>
<tr>
<td>Jesse Balboa, Occidental Petroleum</td>
</tr>
</tbody>
</table>
4.2 OOC Referenced Standards Workgroup Recommendations

The OOC Referenced Standards Workgroup discussed each submitted comment, which was then combined with the list of recommended standards to be reviewed from the Workshop and, if consensus was reached, add the recommended standard to the list. The categories include:

A. Remove – Labeled 1R – 6R in Table 4
B. Update – Labeled 1U – 18U in Table 5
C. Add – Labeled 1A – 11A in Table 6

The priority levels are:

A. High – Needs to be worked on immediately
B. Medium – Needs to be updated when possible
C. Low – Not an urgent update

Note: The focus of the 2020 effort was on review of standards from the standard setting organizations accredited by the American National Standards Institute (ANSI). Several standards from non-ANSI accredited organizations were discussed but are not included in this output document based on guidance from BSEE.
### 4.3 Standards to be Removed

Table 4 lists the Referenced Standards that are currently referenced in the BSEE CFR, which need removal for the reasons listed in the table. In several cases, the recommended removal is correlated to addition of a different standard. As an example, reference 1R is recommended to be removed since it has been withdrawn by API and reference 2U and 4U have been identified for updating.

**Table 4: Referenced Standards to be Removed from BSEE CFR**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Priority</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1R API BULLETIN 2INT-DG (2007)</td>
<td>High</td>
<td>Withdrawn by API; superseded by 2A-WSD 22nd edition and 2FPS 2nd edition, 2T 2nd edition (which are listed for recommended updates)</td>
</tr>
<tr>
<td>2R API BULLETIN 2INT-EX (2007)</td>
<td>High</td>
<td>Withdrawn by API; superseded by new API standards RP 2SIM, 2FSIM, 2MIM and 2RIM 1st editions (which are listed as recommended additions)</td>
</tr>
<tr>
<td>3R API BULLETIN 2INT-MET (2007)</td>
<td>High</td>
<td>Interim document withdrawn by API, superseded by RP2MET, 2nd Edition, which is recommended as an addition</td>
</tr>
</tbody>
</table>
4.4 Standards to be Updated

Table 5 represents the referenced standards which need to be updated to a newer edition of the standard. The currently listed standard edition is outdated due to newer technologies available or lessons learned. The incorporation of newer editions will allow BSEE and industry to eliminate the routine Alternative Compliance requests to use a more recent edition. Note: In Table 5, when listing the incorporated standards, only the last date of the standard, or addendum, or errata currently listed in the CFR is used.

Table 5: Referenced Standards to be Updated in BSEE CFR

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2U API RP 2A-WSD – 21st Edition</td>
<td>API RP 2A-WSD – 22nd Edition (2014)</td>
<td>High</td>
<td>Applicable to new fixed platforms. Note: It is recommended that BSEE also allows continued use of the 21st Edition for existing platforms that were designed under previous editions, especially for the re-use of existing platforms at its original location for another purpose.</td>
</tr>
<tr>
<td>#</td>
<td>Standard Reference</td>
<td>Edition</td>
<td>Edition</td>
</tr>
<tr>
<td>----</td>
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</tbody>
</table>
### 4.5 Standards to be Added

Table 6 lists the Referenced Standards which are not currently in the BSEE CFR but should be to increase safety and efficiency.

**Table 6: Referenced Standards to be Added to BSEE CFR**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Priority</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A  API RP 1111 – 5th Edition (2015)</td>
<td>High</td>
<td>RP is currently included referenced in BSEE NTL 2009-G28 for the calculation of internal pressure. Utilized by operators and recognized by BSEE, incorporation will avoid the need for an Alternative Compliance request.</td>
</tr>
<tr>
<td>2A  API RP 2A-LRFD</td>
<td>Medium</td>
<td>Major update to 1st edition (1993) with significant changes, encourages LRFD approach for GOM fixed structures. The structural design practices are evolving towards a Load Resistance Factor Design.</td>
</tr>
<tr>
<td>4A  API RP 2GEO – 1st Edition (2011) with Addendum 1 (2014)</td>
<td>High</td>
<td>This document provides the best geotechnical technology and recommendations to be used for offshore platform design, repair, and modification. If new design standards (2A, 22nd Edition) are adopted in regulation, then this geotechnical standard needs to be adopted at the same time. Foundation design considerations previously provided in RP2A are now in 2GEO.</td>
</tr>
<tr>
<td>5A  API RP 2MET – 2nd Edition (2019)</td>
<td>High</td>
<td>Currently used by operators - This document provides the best Environmental technology and recommendations to be used for offshore platform design, repair, modification, assessment and is essential for HSE. Current regulations (via API RP 2A-WSD, 21st Edition and API Bulletin 2INT-MET) reference outdated metocean criteria for the design and assessment of offshore structures.</td>
</tr>
<tr>
<td>10A API RP 2TOP – 1st Edition (2019)</td>
<td>Medium</td>
<td>This is a new document focused on design, fabrication, transportation, installation, modification, and structural integrity management for platform topside structures. Complements API 2A-WSD, API 2A-LFRD, API 2 FPS, API 2 T and API 2N.</td>
</tr>
</tbody>
</table>

Revision: R0  September 28, 2020
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>API Std 2CCU – 1st Edition (2017)</td>
<td>High</td>
<td>API 2CCU is the sister document to API 2C and API 2D, which are already incorporated by reference in the CFR. Currently in the Gulf of Mexico and other US waters, all operators handle lifting equipment requirements utilizing a myriad of different standards. There is no guidance for below the hook hardware (Cargo Containers and Lifting Sets) that are used for repeated use offshore.</td>
</tr>
</tbody>
</table>
5 Next Steps
The next steps of the process will continue to include broad stakeholder involvement and will include:

1. Broad SME comment to draft of *Recommended Modernization of Referenced Standards in BSEE CFR*. The objective of the review should be focused on the current content and not adding additional scope. If new scope is identified, it will be reviewed during a similar effort in the 2021 calendar year.

2. OOC Referenced Standards Workgroup review of comments and produce final *Recommended Modernization of Referenced Standards in BSEE CFR* document.

3. Final document issued for use by stakeholders.

After the 2020 final document is issued, this OOC Referenced Standards workgroup will look to offer the following support and continued activity:

- Assist BSEE, as requested, with technical guidance related to the modernization of these standards.
- Convene in early 2021 to review the BSEE effort and provide additional input on the completion of the 2020 effort.
- Perform a similar effort in 2021 and support the process on an annual basis.
Appendix A: List of Currently Referenced Standards in the BSEE CFR

1. ACI Standard 318-95
2. ACI 318R-95
3. ACI 357R-84
4. AGA Report No. 7
5. AGA Report No. 9
6. AGA Report No. 10
7. AISC 360-05
8. ASME BPVC I
9. ASME BPVC IV
10. ASME VIII D1
11. ASME VIII D2
12. ASME B 16.5-2003
13. ASME B 31.8-2003
14. ASSP Z88.2-1992
15. API 510
16. API 570
17. API Bulletin 2INT-DG
18. API Bulletin 2INT-EX
19. API Bulletin 2INT-MET
20. API Bulletin 92L
21. API MPMS 1
22. API MPMS 2.2A
23. API MPMS 2.2B
24. API MPMS 3.1A
25. API MPMS 3.1B
26. API MPMS 4.1
27. API MPMS 4.2
28. API MPMS 4.4
29. API MPMS 4.5
30. API MPMS 4.6
31. API MPMS 4.7
32. API MPMS 4.8
33. API MPMS 5.1
34. API MPMS 5.2
35. API MPMS 5.3
36. API MPMS 5.4
37. API MPMS 5.5
38. API MPMS 5.8
39. API MPMS 5.6
40. API MPMS 6.1
41. API MPMS 6.6
42. API MPMS 6.7
43. API MPMS 7
44. API MPMS 8.1
45. API MPMS 8.2
46. API MPMS 9.1
47. API MPMS 9.2
48. API MPMS 10.1
49. API MPMS 10.2
50. API MPMS 10.3
51. API MPMS 10.4
52. API MPMS 10.9
53. API MPMS 11.1
54. API MPMS 11.2.2A
55. API MPMS 11.1
56. API MPMS 12.2.1
57. API MPMS 12.2.2
58. API MPMS 12.2.3
59. API MPMS 12.2.4
60. API MPMS 14.3.1
61. API MPMS 14.3.2
62. API MPMS 14.3.3
63. API MPMS 14.5
64. API MPMS 14.6
65. API MPMS 14.8
66. API MPMS 20.1
67. API MPMS 21.1
68. API MPMS 21.2
69. API MPMS 21.2A
70. API MPMS 2A-WSD
71. API RP 2D
72. API RP 2FPS
73. API RP 2I
74. API RP 2N
75. API RP 2RD
76. API RP 2SK
77. API RP 2SM
78. API RP 2T
79. API RP 14B
80. API RP 14C
81. API RP 14E
82. API RP 14F
83. API RP 14FZ
84. API RP 14G
85. API RP 14J
86. API RP 17H
87. API RP 65-1
88. API RP 75
89. API RP 86
90. API RP 90
91. API RP 500
92. API RP 505
93. API RP 2556
94. API Specification 2C
95. API Specification 6A
96. API Specification 6AV1
97. API Standard 6AV2
98. API Specification 6D
99. API Specification 11D1
100. API Specification 14A
101. API Specification 16A
102. API Specification 16C
103. API Specification 16D
104. API Specification 17D
105. API Specification 17J
106. API Specification Q1
107. API Standard 53
108. API Standard 65—Part 2
109. API Standard 2552
110. API Standard 2555
111. ASTM Standard C 33-07
112. ASTM Standard C 94/C
113. ASTM Standard C 150-07
114. ASTM Standard C 330-05
115. ASTM Standard C 595-08
116. AWS D1.1:2000
117. AWS D1.4-98
118. AWS D3.6M:1999
119. NACE Standard MR0175-2003
120. NACE Standard RP0176-2003
121. ISO/IEC 17011
122. ISO 17021-1
123. COS-2-01
124. COS-2-03
125. COS-2-04