



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration



PAC Preparation Briefing for the GPAC/LPAC Meeting



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PHMSA: Your Safety is Our Mission



Periodic Standards Update Rule

PAC Preparation Briefing

October 6, 2021



Proposed Rule

- PHMSA published the Periodic Standards Update Notice of Proposed Rulemaking (NPRM) on January 15, 2021 (86 FR 3938)
 - This rule is commonly referred to as “Standards Update I”
 - The comment period closed on March 16, 2021
 - PHMSA proposed the incorporation by reference of more than 20 consensus standards
 - PHMSA also proposed miscellaneous non-substantive edits



Outline

Introduction and Background

- **Vote 1:** Proposed Rule (GPAC)
- **Vote 2:** Proposed Rule (LPAC)
- **Vote 3:** API Recommended Practice (RP) 651 (LPAC)
- **Vote 4:** ASME B31.8S (GPAC)
- **Vote 5:** API Standard (Std) 2350 (LPAC)
- **Vote 6:** Report of the Proceeding (GPAC)
- **Vote 7:** Report of the Proceeding (LPAC)



Proposed Updates



Standards Proposed for Incorporation in Part 192

PHMSA proposed the incorporation of 16 standards into Part 192.

- **American Petroleum Institute**
 - API Spec 5L, April 2018
 - API Spec 6D, August 2014
 - API Std 1104, September 2013
- **American Society of Mechanical Engineers**
 - ASME B31.8, November 20, 2018
 - ASME B31.8S, October 31, 2016
 - ASME B36.10M, October 12, 2018
- **Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.**
 - MSS SP-44, April 2020
- **American Society for Testing and Materials**
 - ASTM A53/A53M, July 1, 2020
 - ASTM A106/A106M, November 1, 2019
 - ASTM A333/A333M, November 1, 2018
 - ASTM A381/A381M, November 1, 2018
 - ASTM A671/A671M, March 1, 2020
 - ASTM A691/A691M, November 1, 2019
- **National Fire Protection Association**
 - NFPA 58, October 25, 2019
 - NFPA 59, August 17, 2017
 - NFPA 70, August 23, 2016



Miscellaneous Edits: Part 192

PHMSA proposed editorial amendments and corrections to the PSRs

- One proposed change clarifies that operators of liquefied petroleum gas facilities must only meet the requirements for the NFPA standard that is applicable to the type of facility they operate, based on the scope and applicability statements in those standards
 - The AGA suggested that PHMSA incorporate the most recent edition of NFPA 59 by reference and suggested edits to 49 CFR 192.11 to clarify the scope of NFPA 58 and NFPA 59
 - The regulations currently require operators of liquefied petroleum plants and pipelines to meet the requirements of both NFPA 58 and NFPA 59
 - The proposed change clarifies that operators must only meet the requirements for the NFPA standard that is applicable to the type of facility they operate, based on the scope and applicability statements in those standards



Miscellaneous Edits: Part 192

- Another revision modifies the minimum wall thickness tables in § 192.121 for plastic pipe made of polyethylene, polyamide 11, and polyamide 12 to include specifications for pipe with a copper tubing size of 1¼ inches
 - Stakeholders requested that PHMSA also consider including 1¼-inch copper tubing size pipe
 - PHMSA did not intend to exclude specifications such as 1¼-inch copper tubing size pipes, as the revised design factor is already permitted for similar, adjacent sizes, such as 1¼-inch iron pipe size pipes



Miscellaneous Edits: Part 192

- Miscellaneous edits in Part 192 include:
 - Update references to the PHMSA website in 49 CFR 191.22 (b) and (c)
 - Add the definition for a master meter system, as defined in Part 191, to Part 192
 - Correct the placement of the word “in” in 49 CFR 192.153(d)
 - Remove a reference to an inactive phone number in 49 CFR 192.727(g)
 - Add the building number to the DOT headquarters address in 49 CFR 192.805



Standards Proposed for Incorporation in Part 195

PHMSA proposed the incorporation of 18 updated standards in Part 195

▪ **American Petroleum Institute**

- API RP 651, September 2014
- API RP 2026, June 2017
- API Spec 5L, April 2018
- API Spec 6D, August 2014
- API Std 620, October 2013
- API Std 650, March 1, 2020
- API Std 1104, September 2013
- API Std 2000, March 2014
- API Std 2350, September 1, 2020

▪ **American Society of Mechanical Engineers**

- ASME B31.8, November 20, 2018

▪ **American Society for Testing and Materials**

- ASTM A53/A53M, July 1, 2020
- ASTM A106/A106M, November 1, 2019
- ASTM A333/A333M, November 1, 2018
- ASTM A381/A381M, November 1, 2018
- ASTM A671/A671M, March 1, 2020
- ASTM A691/A691M, November 1, 2019

▪ **Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.**

- MSS SP-75, December 2019

▪ **NACE International**

- NACE SP0204, March 14, 2015



Miscellaneous Edits: Part 195

- Miscellaneous edits in Part 195 include:
 - Update references to PHMSA's website in 49 CFR 195.64
 - Remove a reference to an inactive phone number in 49 CFR 195.59(a)
 - Correct 49 CFR 195.3(c)(3) to reflect that ASME B31.4 is no longer referenced in 49 CFR 195.452(h)
 - Remove references to 49 CFR 195.242(c) and (d) in 49 CFR 195.1(c) because this section no longer exists in the regulations



Comment Submissions

Eleven individuals and organizations submitted eight comments or documents containing background materials. Of these eight comments, one was anonymous, one came from an individual, one was a joint comment, and organizations submitted the remaining five.

- Aaron Adamczyk
- Alyeska Pipeline Service Company
- Anonymous
- American Fuel & Petrochemical Manufacturers
- American Petroleum Institute
- Joint Comment: American Petroleum Institute, Interstate Natural Gas Association of America, GPA Midstream, American Gas Association, and American Public Gas Association
- American Society of Mechanical Engineers
- National Propane Gas Association



General Comments: Support and Retroactivity

- PHMSA received several comments in support of the rule
- PHMSA received a comment regarding retroactivity:
 - The Alyeska Pipeline Service company expressed concerns with the proposed API Specification 6D. Alyeska notes that the proposed API Spec 6D does not allow for flanged valves with intermediate pressure ratings. Alyeska recommends that PHMSA include allowances for legacy designs that incorporate flanged valves with intermediate design pressures.
 - Alyeska further notes that that their flange connections exceed ASME B16.47—but not API Spec 6D—by “using special bolting dimensions as an extra safety measure not required” by API Spec 6D
 - PHMSA's Proposed Response:
 - If incorporated, API Spec 6D will apply only to new construction, not existing pipelines



General Comments: Delayed Applicability

- PHMSA received a number of general suggestions from a joint comment submitted by the American Petroleum Institute, Interstate Natural Gas Association of America, GPA Midstream, American Gas Association, and American Public Gas Association
- The joint comment requested that PHMSA allow operators to comply with the 45th edition of API 5L and the 2019 edition of MSS SP-44 until January 1, 2022
- PHMSA's Proposed Response:
 - At this time, it is unlikely that the final rule will publish prior to January 1, 2022



General Comments: Standards Outside of the NPRM

- PHMSA received several comments requesting the inclusion of standards that were not proposed in the NPRM
 - The joint comment requested that PHMSA incorporate the second edition of API RP 80
 - The joint comment also requested that PHMSA incorporate API RP 1181
 - Finally, the joint comment requested that PHMSA update API Stds 620, 650, and 653
- PHMSA's Proposed Response:
 - PHMSA will consider such standards for inclusion in future rules



General Comments:

More Frequent Standards Update Rules

- The joint comment recommended that PHMSA should issue a standards-update rule at least every 2 years
- PHMSA's Proposed Response:
 - PHMSA will issue standards-update rules as efficiently as possible



General Comments: API RP 1130 Correction

- The joint comment recommended that PHMSA should correct a reference to API RP 1130 in 49 CFR 195.3(b)(7)
 - 49 CFR 195.3(b)(7) currently references the third edition of API RP 1130, but the first edition is still the most recent edition
- PHMSA reviewed this section and determined that it references an incorrect edition of API RP 1130
- PHMSA's Proposed Response:
 - PHMSA will revise 49 CFR 195.3(b)(7) to reference the first edition of API RP 1130



General Comments: MSS SP-44

- The joint comment supported PHMSA's recommended change stating that a flange or flange accessory that meets the minimum requirements of either ASME B16.5 or MSS SP-44 complies with 49 CFR Section 192.147(a)



Recommended Committees Vote

- Pipeline Safety: Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments (also known as Standards Update I)
 - PHMSA recommends that the GPAC and LPAC vote separately on the proposed rule, including all standards in this rule, **except for API 2350, ASME B31.8S, and API RP 651**, which will be discussed shortly.
 - PHMSA recommends that the GPAC and LPAC should vote to approve the proposed rule, including the following standards:
 - API RP 2026
 - API Spec 5L
 - API Spec 6D
 - API Std 620
 - API Std 650
 - API Std 1104
 - API Std 2000
 - ASME B31.8
 - ASME B36.10M
 - ASTM A53/A53M
 - ASTM A106/106M
 - ASTM A333/A333M
 - ASTM A381
 - ASTM A671/671M
 - ASTM A691/691M
 - MSS SP-44
 - MSS SP-75
 - NACE SP0204
 - NFPA 58
 - NFPA 59
 - NFPA 70



Topic:

API Std 2350 (LPAC)



API Std 2350 Background

- Current Incorporated Edition: API RP 2350: Overfill Protection for Storage Tanks in Petroleum Facilities, 3rd Edition
- Location of Incorporation: 49 CFR 195.428(c)
- Proposed Standard: API Std 2350: Overfill Prevention for Storage Tanks in Petroleum Facilities, 5th Edition
- Description of Standard:
 - Designed for storage tanks associated with facilities that receive flammable and combustible petroleum liquids
 - Addresses minimum overfill and damage-prevention practices for aboveground storage tanks in petroleum facilities
- Changes
 - New Requirements for:
 - A written management system for overfill-prevention processes
 - Overfill risk-assessment processes
 - Expanded requirements for testing OPP systems/related procedures
 - The use of safety-instrumented systems on new automatic overfill prevention systems
 - Includes dedicated pipeline relief tanks on breakout tanks



API Std 2350 Comment

- American Fuel & Petrochemical Manufacturers
 - Stated operators might have to expand their programs and make changes to their operational parameters if we incorporate API Std 2350
 - Expressed confusion regarding how incorporation of this standard will impact existing tank overflow systems
 - Noted that Section 195.428(c) states that operators must only install systems in accordance with API RP 2350 but fails to specify which sections of API Std 2350 operators should reference for installations
 - They stated that the lack of specificity causes confusion regarding whether the operation and maintenance section of API Std 2350 would also apply
 - They noted that Section 195.428(c) implies that other parts of the document are also required
 - Requested:
 - Clarification in the regulatory text for 49 CFR 195.428 regarding which sections of API Std 2350 relate to installation
 - Clarification regarding how this will impact existing tank overflow systems



API Std 2350 Proposed Resolution

- PHMSA Response:
 - 49 CFR 195.428(c) states that:
 - “[o]ther aboveground breakout tanks with 600 gallons (2271 liters) or more of storage capacity that are constructed or significantly altered after October 2, 2000, must have an overfill protection system installed according to API RP 2350 (incorporated by reference, see § 195.3)”
 - The requirements in 195.428(c) are specific to installation, not to the operation or maintenance of the relevant aboveground breakout tanks
 - PHMSA recommends incorporating the proposed API Standard 2350 without edit



Topic:

ASME B31.8S (GPAC)



ASME B31.8S Background

- Current Incorporated Edition: ASME/ANSI B31.8S-2004: Supplement to B31.8 on Managing System Integrity of Gas Pipelines
- Location of Incorporation: §§ 192.903 note to the definition of Potential impact radius; 192.907 introductory text, (b); 192.911 introductory text, (i), (k), (l), (m); 192.913(a), (b), (c); 192.917 (a), (b), (c), (d), (e); 192.921(a); 192.923(b); 192.925(b); 192.927(b), (c); 192.929(b); 192.933(c), (d); 192.935 (a), (b); 192.937(c); 192.939(a); and 192.945(a)
- Proposed Standard: ASME B31.8S-2016: Managing System Integrity of Gas Pipelines, Supplement to ASME B31.8
- Description of Standard:
 - Describes the foundations for an effective integrity-management (IM) program for gas transmission pipelines
 - Along with Subpart O of Part 192, ASME B31.8S provides the essential features of an IM program
 - Applies to onshore pipeline systems constructed with ferrous materials (such as iron and steel) that transport gas
 - Designed to provide operators with the information necessary to develop and implement an effective integrity management program utilizing proven industry practices and processes
 - Intended to improve the effectiveness of the Federal gas transmission integrity-management requirements
- Changes
 - Additional information on Stress Corrosion Cracking Direct Assessments, also known as SCCDA
 - Guidance on managing cracking threats
 - Additional performance metrics for block-valve failures
 - Requirements regarding examinations for immediate and 1-year repair conditions
 - Additional/updated references
 - Other minor technical changes, editorial revisions, and added or revised guidance



ASME B31.8S Background

- PHMSA proposed the 2016 edition for incorporation
 - The 2018 edition includes several acceptable editorial changes
 - The 2018 edition removed nearly all communications plan requirements from Section 10
 - PHMSA requested comments regarding whether incorporation of the 2018 edition was appropriate



ASME B31.8S Comments

- The joint comment
 - Supported the incorporation of the 2016 edition of ASME B31.8S, but also recommended that PHMSA incorporate the 2018 edition
 - Noted the communications plan requirements were not removed entirely, but simply moved from Section 10 of ASME B31.8S to Chapter V, Paragraph 850.9 of ASME B31.8
 - ASME B31.8 is the companion standard to ASME B31.8S
 - B31.8S now includes a reference in Section 10 that points to the communications plan requirements in ASME B31.8
 - Previously, some communications requirements were found in ASME B31.8 Section 850 and others were in ASME B31.8S Section 10; now they are all in one place
 - Recommended that PHMSA revise 49 CFR 192.911(m) to directly reference the communications plan requirements in Paragraph 850.9 of the 2018 edition of ASME B31.8
- The American Society of Mechanical Engineers' comment
 - Recommended that PHMSA incorporate the 2018 edition
 - Also noted that the communications plan requirements were moved and that there is now a reference to the location of these requirements in Section 10 of B31.8S
 - Recommended that PHMSA add a reference to 49 CFR 192.911(m) in the proposed language for 49 CFR 192.7(c)(5)



ASME B31.8S Proposed Resolution

- PHMSA Response:
 - PHMSA recommends the incorporation of the 2018 edition of ASME B31.8S given the fact that the communication plan requirements are still contained in the code and were merely moved from ASME B31.8S to ASME B31.8
 - In addition, PHMSA recommends the revision of 49 CFR 192.911(m) to directly reference the communications plan requirements



Topic:

API RP 651 (LPAC)



API RP 651 Background

- Current Incorporated Edition: ANSI/API RP 651: Cathodic Protection of Aboveground Petroleum Storage Tanks, 3rd Edition
- Location of Incorporation: 49 CFR 195.565 and 195.573(d)
- Proposed Standard: API RP 651: Cathodic Protection of Aboveground Petroleum Storage Tanks, 4th Edition
- Description of Standard:
 - Contains:
 - Procedures and practices for effective corrosion control on aboveground storage tank bottoms that use cathodic protection;
 - Provisions for the application of cathodic protection to existing and new aboveground storage tanks; and
 - Information and guidance for cathodic protection specific to aboveground metallic storage tanks in hydrocarbon service
- Changes
 - Primarily minor technical improvements and editorial revisions
 - More specific details throughout
 - More conservative consideration of cathodic protection based on pad material, product temperature, and tank size



API RP 651 Comment

- The American Fuel & Petrochemical Manufacturers
 - Stated PHMSA should not consider double-bottomed tanks with an interstitial fill of concrete (not soil) or tanks on continuous concrete pads to be subject to cathodic-protection installation requirements
 - They stated that such tanks do not allow any part of the pipe through which hazardous liquid moves to come into contact with the upper layer of the earth
 - They would like PHMSA to state that cathodic protection isn't required if API RP 651 advises against it, such as for tanks that are not in contact with soil, double-bottomed tanks, and tanks on continuous concrete pads
- The joint comment
 - Asked PHMSA to clarify requirements for the cathodic protection of double-bottom breakout tanks
 - Asked PHMSA to allow operators to protect double-bottom breakout tanks without requiring cathodic protection



API RP 651 Proposed Resolution

■ PHMSA Response:

- The comments and recommendations were outside of the scope of this rule
- For the purpose of this rule, PHMSA did not propose or consider any changes in the application of the standard
- PHMSA is currently considering an interpretation request from Chemoil Energy regarding the out-of-scope issues associated with API RP 651
- PHMSA recommends incorporating the proposed API RP 651 without edit



Thank You



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