Public Comment Response Summary
Aboveground Storage Tank Standards Update Project
Proposed Revisions to Article 1 18 AAC Chapter 75
June 2021

Introduction

The Alaska Department of Environmental Conservation's (ADEC) Prevention, Preparedness, and Response Program (PPRP) proposed this package to amend the regulations in 18 AAC 75.065 and 18 AAC 75.066 to update prevention requirements for regulated aboveground oil storage tanks by incorporating current industry standard versions for field-constructed and shop-fabricated tanks. The proposed updates are for standards that cover the installation, operation, and maintenance of aboveground oil storage tanks.

Summary of changes

The department received public comments from four commenters: the Alaska Oil and Gas Association (AOGA), Prince William Sound Regional Citizen's Advisory Council (PWSRCAC), Marathon Petroleum Corporation, and ConocoPhillips Alaska, Inc. Two of these commenters are organizations that that represent multiple stakeholders (AOGA and PWSRCAC), and the other two are Oil Discharge Prevention and Contingency plan holders. AOGA, Marathon Petroleum Corporation, and ConocoPhillips Alaska, Inc. were all supportive of the department adopting the most recent industry standards; recommendations for specific revisions and clarification were provided. PWSRCAC's comments focused largely on concerns with potential increase to initial internal inspection intervals for regulated tanks, and they provided recommendations for modification to the proposed regulations.

In response to the questions and comments received during public review period, the department made several changes to the original proposed language including: updating five industry standards to more recent versions or editions; clarifying applicable installation, operation, and maintenance standards for cathodic protection systems; amending requirements to retrofit or replace cathodic protection systems; and adding provisions for field-constructed and shop-fabricated aboveground oil storage tanks to be constructed and installed in compliance with an alternative standard, if approved by the department.

Organization

This document is organized in a comment/response format, and it addresses comments received during the formal public notice period that ended on February 25, 2021.

Summary of Comments

Standards Outdated

Comment:
Two commenters stated that the proposed editions or versions of industry standards included in the proposed amendments are already outdated (e.g., API 653, API 12R1, API 650, API 12F, API RP 652). The commenters recommended that the department adopt the most recent editions or versions of prescribed industry standards.

Response:
In response to the public comments, the department obtained and carefully reviewed the recommended revisions. We agree the latest editions of the five standards listed below should be included in the proposed regulations. Three of the standards are design and construction standards (API 650, API 652, and API 12F) that are applicable to new tanks only. Within API 650, Annex I and Annex L do not have significant revisions in the thirteenth edition, and the January 2021 Errata corrects simple typographic and equation errors. Changes to API

652 and API 12F do not contain significant changes for our scope. The two updated operations and maintenance standards are API 653 and API 12R1. API 653 includes additional clarifications and beneficial provisions, but they are not major additional requirements. It also includes renumbering and editorial marks. API 12R1 refers the user to API 653 and to API 650, Annex I when applicable. Changes are not significant. The standards listed below have been incorporated into the regulation.

- API 650, *Welded Tanks for Oil Storage*, Thirteenth Edition, Includes Errata 1 (2021)
- API RP 652, *Linings of Aboveground Petroleum Storage Tank Bottoms*, Fifth Edition, May 2020
- API 653, *Tank Inspection, Repair, Alteration, and Reconstruction*, Fifth Edition, Includes Addendum 1 (2018), Addendum 2 (2020), and Errata 1 (2020)
- API 12F, *Specification for Shop Welded Tanks for Storage of Production Liquids*, Thirteenth Edition, January 1, 2019
- API 12R1, *Installation, Operation, Maintenance, Inspection, and Repair of Tanks in Production Service*, Sixth Edition, March 1, 2020.

Update Standards More Frequently

Comment:
Two commenters stated that the department should adopt the most recent version of industry standards rather than incorporating specific editions into regulations by reference. Commenters also recommended that the department should update industry standard references within the regulation more frequently to reduce compliance uncertainty when standards become outdated.

Response:
Under AS 44.62.245, the department must be explicitly authorized by a statute to incorporate a future amended version of a document or other material. We do not have that authorization; we are required by statute to specify the edition and date of any publication adopted by reference. The department disagrees with the recommendation because it is not allowable by statute. We also believe the department is responsible to review standards it incorporates into regulation by reference to ensure they are protective of public health and the environment.

The department agrees it would be beneficial to plan holders and to the department to updated standards more frequently, and we will endeavor to do so with more frequent regulation packages.

Use of Alternative Standards

Comment:
The department received two comments stating that regulations should expressly allow for alternative tank design and construction/installation standards on a case-by-case basis.

Response:
The department agrees with this recommendation and has added subparagraph, 18 AAC 75.065(q)(1)(C), for field-constructed aboveground storage tanks, and paragraph 18 AAC 75.066(j)(4) for shop-fabricated aboveground storage tanks. This revision allows for another equivalent standard for alternative tank design construction and installation to be used, if approved by the department. This addition is consistent with 18 AAC 75.065(i)(1)(B) and 18 AAC 75.065(j)(1)(C).

Federal Regulatory Requirements Sufficient / Good Engineering Practices

Comment:
One commenter stated the department should not duplicate or overlap federal requirements, and that the state should not adopt standards that are already covered by federal requirements. The commenter specifically noted two federal regulations: Environmental Protection Agency's (EPA) Spill Prevention, Control, and Countermeasure (SPCC) rule and Occupational Safety and Health Administration's (OSHA) Process Safety Management Standards recognized and generally accepted good engineering (RAGAGEP) requirements.

Response:
AS 46.04.070 notes that "*The department shall adopt regulations . . . that do not conflict with and are not preempted by federal law or regulations.*" The department does not agree that regulations proposed for 18 AAC 75.065 and 18 AAC 75.066 conflict with or are preempted by federal law or regulation. The federal SPCC Rule does not prohibit the state from developing its own regulations regarding oil pollution. Process Safety Management overseen by OSHA is for high pressure vessels (tanks) located inside of modules. The department does not regulate high pressure vessels that fall under OSHA's jurisdiction. In addition, RAGAGEP is a performance based approach without definition. The department does not agree that a regulatory approach using RAGAGEP would promote consistency and predictability for the regulated industry.

Initial Internal Inspection Intervals/18 AAC 75.065(a)(1) and 18 AAC 75.065(b); 18 AAC 75.065(d)

Comment:
The department received a comment disagreeing with incorporating the updated edition of API 653 because it allows for extended initial inspection intervals beyond ten years based on added safeguards such as fiberglass liners, coating systems, cathodic protection systems, thicker initial tank bottom, release prevention barriers, and specific stainless steel tank bottoms. The commenter cites installation errors and poor workmanship associated with older tanks as one basis for their concern. They point out that the effectiveness of these safeguards cannot be assessed until after the tank has been put into long term operation, and they believe that ultimately an initial internal inspection interval of more than 10 years poses increased risk for leaks.

The commenter noted that a completed Annex L API 650 Storage Tank Data Sheet defines the specific technical information such as geometry, design loads, materials, and appurtenances, as well as an outline sketch of the tank. In addition, they commented that the Storage Tank Data Sheet would detail additional safeguards such as coatings, cathodic protection, or a release prevention barrier, and that the Storage Tank Data Sheet would support the extension of the initial inspection interval to greater than 10 years if the safeguards listed were included in Table 6.1 of API 653.

They commented that although the requirement to retain a completed Storage Tank Data Sheet is recommended, they are concerned with extending the initial inspection interval.

Response:
The API 653 provision for an increased initial inspection interval is the incentive for installing safeguards. The safeguards concept, listed in API 653 Table 6.1 is based on the reliance of quality design, installation, and construction practices. These safeguard provisions have been included in API 653 since 2010, and they have been revised 5 times since then.

The department agrees that it is essential that new tanks and new tank bottoms are constructed and installed properly and that each safeguard must meet the specific standards listed in Table 6.1 of API 653. The proposed

regulations at 18 AAC 75.065(b)(2) require the department to approve any initial internal inspection interval beyond 10 years. The department also specified the request must be substantiated by thorough documentation by adding the requirement for a completed Annex L Storage Tank Data Sheet of API 650 in 18 AAC 75.065(d)(3). The department believes that allowing consideration for the safeguards to establish an extended inspection interval while requiring the department's approval is a balanced approach.

Similar Service Assessment and Risk Based Inspection, 18 AAC 75.065(b)(3)

Comment:
One commenter objected to the proposed regulations removing the exclusion of a Similar Service Assessment (SSA) from being used to determine inspection intervals. The commenter also stated they would like to see the risk-based inspection assessment removed as an option for extending a tank's initial inspection interval.

Response:
The department excluded SSA in 2006 because there was no specificity for SSA in API 653. Since then, Annex H, SSA, has been added to API 653. It is an informative Annex that provides guidance for operators who may wish to use similar service as the basis for determining inspection intervals after the initial interval inspection is completed when the tank has a change in service. It is no longer offered as a "stand alone" option for initial inspection intervals or, for subsequent inspection intervals, without a change in service of the tank. SSA is now just an option that may be used to determine the corrosion rate for one of the proposed safeguards in API 653, Table 6.1. As noted previously, department review and approval are required for all initial internal inspection intervals that exceed 10 years, including the one that is determined in part based on SSA.

The department has accepted risk based inspection (RBI) assessment methodology since 2007. We removed the direct reference to API 580, *Risk Based Inspection*, from our regulations because it is now specifically referenced in API 653. The proposed regulation in 18 AAC 75.065(b)(3) still requires that Alaska registered engineers, as defined in 18 AAC 75.990(103), must sign RBI assessments. We believe this is an important addition that provides assurance that the RBI assessment will reflect Alaska conditions.

Comment:
One commenter recommended elimination of the existing regulations at 18 AAC 75.065(b)(2) and (3) in their entirety. In addition, they recommend eliminating all the proposed regulation revisions at 18 AAC 75.065(b)(2), including subparts (A), (B), and (C). The original 18 AAC 75.065(b)(2) excluded Similar Service Assessment (SSA) as an option for establishing inspection intervals; 18 AAC 75.065(b)(3) allowed Risk Based Inspection (RBI) assessments for establishing inspection intervals. The focus of the comment was that the department's requirement that plan holders follow API 653 for tank operations and maintenance should be adequate and that plan holders should not be required to seek department approval for initial internal inspection intervals beyond ten years or for any other variations in inspection intervals that might be obtained by following API 653.

Response:
The department disagrees that additional department review and approval should be eliminated for initial internal tank inspections beyond ten years. As stated above, this approval provides an opportunity to verify that construction, installation, operations and maintenance have been fully documented, and that any safeguards implemented as listed in Table 6.1 are fully documented to adhere to the referenced standards, including use of API 653, Annex H, SSA for determining corrosion rate for determining tank bottom thickness if selected by the plan holder. In addition, API 653, Table 6.1 that outlines safeguards that may extend an initial internal inspection interval has been revised five times in the past decade. With frequent revisions, some nuances may not be uniformly applied and could lead to inconsistencies with regulatory compliance requirements. The department believes it is in the best interest of the State of Alaska to provide review of initial intervals based on Table 6.1 to ensure consistent application of requirements statewide.

Comment:
One commenter suggested that if the department repeals 18 AAC 75.065(b)(2) and then revised 75.065(b)(3) to include "After {effective date of regulations}, an assessment or.."

Response:
The department has not repealed 18 AAC 75.065(b)(2). We have revised 18 AAC 75.065(b)(3) to state that inspection intervals may be based on risk based inspection as specified in Section 6.4.2.2.2 of API 653; and inspection intervals determined by risk based inspection may not exceed 30 years.

18 AAC 75.065(d)

Comment: One commenter suggested that removal of the requirement to provide inspection records upon request by the department seemed to remove the ability for the department to have access to important information for inspections. They noted that if records are not available to the department, the owners/operators are trusted to inspect and repair their tanks in accordance with the regulations with little to no regulatory oversight. The commenter did not support diminishment of department oversight and recommended that access to inspection records be retained.

Response: The requirements were not diminished; this language was removed because it duplicated requirements under 18 AAC 75.020(e). This subsection was revised so plan holders would not be required to keep routine (monthly) walk-around visual tank inspection and monthly overfill testing records forever. The department believes that the requirements under 18 AAC 75.020(e) to maintain these records for five years is adequate. Current regulations at 18 AAC 75.020(e) also require that records be maintained in a retrievable format and that copies are made available to the department upon request.

18 AAC 75.065(d)(3)

Comment:
One commenter suggested that the department should not adopt the proposed regulatory text for new paragraph, 18 AAC 75.065(d)(3) because it would be duplicative to 18 AAC 75.065(b)(2).

Response:
The department does not agree that 18 AAC 75.065(d) is duplicative of 18 AAC 75.065(b)(2). The addition of the new paragraph, 18 AAC 75.065(d)(3) requires owners or operators to maintain required records related to the design, construction, and installation of tanks that are necessary for the department's review of requests to extend the initial internal tank inspection beyond 10-years.

18 AAC 75.065(j)(3)

Comment:
One commenter pointed out a conflict between the effective dates for 18 AAC 75.065(j)(3) and 18 AAC 75.065(q)(3). The proposed changes in (j)(3) are not necessary as this section should only discuss tanks placed in service after December 30, 2008 and before the effective date of the proposed regulations. Retaining the current language in (j)(3) as-is and keeping similar requirements for new tanks in proposed new section (q)(3) would reduce confusion as to what "generation" of tank installation the requirement applies.

Response:
The department agrees and has modified the 18 AAC 75.065(j)(3)(C) to reflect that cathodic protection systems installed between December 30, 2008 and "*six months after the effective date of the regulations*" must be *installed* in accordance with NACE RP0193-2001, the standard current in place for installations after December 30, 2008. The department added a new paragraph,18 AAC 75.065(j)(3)(D), requiring cathodic protection systems installed under 18 AAC 75.065(j)(3) to be operated and maintained in accordance with the updated NACE SP0193-2016 on or after {*six months after the effective date of the regulations.*}.

Comment:
One commenter stated that the requirements in this section for cathodic protection at the tank bottom to prevent external corrosion are applicable to on-grade installations in contact with soil or other corrosion-inducing materials. Neither the requirements nor the referenced industry standards apply to elevated tanks. The department should revise this section to specify applicability to "non-elevated" tank installations, to avoid compliance uncertainty.

Response:
The department does not intend to apply cathodic protection requirements for elevated tanks. We have added a new paragraph, 18 AAC 75.065(j)(3)(E) to clarify the cathodic protection requirements are not applicable for elevated tanks.

18 AAC 75.065(m)

Comment:
One commenter stated the entirety of section 18 AAC 75.065(m) should be repealed because the requirements presented in this section are already appropriately addressed in (j)(3) and new proposed (q)(3). Section (m) is redundant and creates unnecessary, confusing "circular" references to other parts of the regulations.

Response:
The paragraphs 18 AAC 75.065(j)(3) and 18 AAC 75.065(q)(3) are specific to tank bottom corrosion control for tank installations placed in service at different times. The requirements of 75.065(m) are specifically for when an aboveground storage tank owner or operator wants to retrofit or replace a cathodic protection system for any tank, regardless of the tank installation date. The department has amended 18 AAC 75.065(m) to include "on or after {*six months after the effective date of regulations*} shall meet the applicable requirements of (q)(3)…"

18 AAC 75.066(a)(1), (2), and (3)

Comment:
A commenter proposed changes to amend the effective date of the shop-fabricated aboveground storage tank regulations. These sections of the regulations do not specify which tanks must meet provisions of the proposed new section (k), and we caution against applying requirements of proposed new section (k) retroactively to tanks already in operation.

Response:

The department has added language to 18 AAC 75.066(k) to clarify that shop-fabricated aboveground oil storage tanks with a storage capacity of 75,000 gallons or greater, that are place in service on or after six months after the effective date of regulations, must meet the requirements of 18 AAC 75.065.

18 AAC 75.066(i)

Comment:
One commenter stated that this proposed new section over complicates the regulation and defeats the purpose to differentiate between stationary, vertical, on-grade aboveground oil storage tanks and elevated or portable, above-grade aboveground oil storage tanks. The requirements of this new proposed section cause confusion by imposing requirements for "non-elevated" tanks that mirror requirements in 18 AAC 75.065.

Response:
The new subsection, 18 AAC 75.066(i), addresses requirements for shop-fabricated tanks that are not elevated, regardless of its capacity. The requirements include a leak detection system designed and installed, in accordance with Appendix I of the American Petroleum Institute's (API) *Welded Tanks for Oil Storage* (API 650). This subsection also includes requirements for systems that must be installed to protect the bottom of each shop-fabricated aboveground oil storage tank from external corrosion, unless deemed not necessary by an evaluation conducted by a corrosion expert consistent with Chapter 5 of API's *Cathodic Protection of Aboveground Petroleum Storage Tanks,* Fourth Edition, September 2014 (API RP 651).

18 AAC 75.066(k)

Comment:
One commenter opposed the proposed changes to clarify requirements for aboveground oil storage tanks based on their storage capacity because this change would require a shop-fabricated tank of a specified capacity to be regulated as a field-constructed tank.

Response:
The construction standards proposed to be adopted by reference in 18 AAC 75.066 were written specifically for shop-fabricated tanks with capacities of less than 75,000 gallons. The construction standards and prevention and maintenance measures of 18 AAC 75.065 are more appropriate for shop-fabricated tanks with capacities of 75,000 gallons or greater. Large tanks (over 75,000 gallons) cannot be built per UL 142, and SPI-SP001 cannot be used for any field-constructed tanks larger than 30 feet diameter, 50 feet high, or shell thicker than 0.25 inches. The storage capacity requirements are based on the standards that we are proposing to adopt.

Miscellaneous

Comment:
Commenters pointed out a typographical error in 18 AAC 75.065(d)(1) and 18 AAC 75.066(i)(2)(A).

Response:
The department appreciates the comments. The errors are not in the official versions of the AAC but in the unofficial PDF versions. These versions will be updated.