

EXECUTIVE SUMMARY

Final-Form Rulemaking Water Quality Standards and Implementation – Manganese 25 Pa. Code Chapters 93 and 96

This final-form rulemaking amends 25 Pa. Code Chapter 93 (relating to water quality standards). The final-form amendments delete manganese from Table 3 at § 93.7 (relating to specific water quality criteria) and add manganese to Table 5 at § 93.8c (relating to human health and aquatic life criteria for toxic substances).

Purpose of the Final Rulemaking

On October 30, 2017, subsection (j) (known as “Act 40”) was added to section 1920-A of The Administrative Code of 1929. Referring to the Environmental Quality Board (Board), this subsection states:

(j) The board shall promulgate regulations under the act of June 22, 1937 (P.L. 1987, No. 394), known as "The Clean Streams Law," or other laws of this Commonwealth that require that the water quality criteria for manganese established under 25 Pa. Code Ch. 93 (relating to water quality standards) shall be met, consistent with the exception in 25 Pa. Code § 96.3(d) (relating to water quality protection requirements). Within ninety days of the effective date of this subsection, the board shall promulgate proposed regulations.

The purpose and goals of this final-form rulemaking are: to delete from Table 3 at § 93.7 the existing manganese numeric water quality criterion, which was established for the protection of the Potable Water Supply use; and to add to Table 5 at § 93.8c a criterion designed to protect human health from the neurotoxicological effects of manganese, which will also ensure adequate protection of all water uses. This final-form rulemaking will maintain the point of compliance for the human health manganese criterion in all surface waters in accordance with § 96.3(c) (relating to water quality protection requirements).

Summary of the Final Rulemaking

Final amendments to Chapter 93 – This final-form rulemaking: adds to § 93.8c Table 5, Water Quality Criteria for Toxic Substances, a numeric water quality criterion for manganese of 300 µg/L (or 0.3 mg/L), which is designed to be protective of human health; and deletes from § 93.7 Table 3 the existing Potable Water Supply criterion for manganese of 1.0 mg/L. The new human health criterion for manganese (0.3 mg/L) is more stringent than the existing Potable Water Supply criterion (1.0 mg/L), and the new criterion includes protection of the Potable Water Supply use. Since the new criterion will be included in Table 5, it appropriately applies to all surface waters of this Commonwealth, consistent with § 93.8a(a) (relating to toxic substances), § 96.3(c) and the Department’s Water Quality Toxics Management Strategy – Statement of Policy (25 Pa. Code Chapter 16). Based upon the Department’s scientific review, the adoption and implementation of a human health criterion in all surface waters should also provide adequate protection to aquatic life and livestock from the toxic effects of manganese.

The new human health criterion of 0.3 mg/L is designed to protect human health, particularly infants and children, from the neurotoxicological effects of manganese when levels necessary to maintain adequate health are exceeded. The criterion was developed based on the latest toxicological assessments, methods, and recommendations from the United States Environmental Protection Agency (EPA) and consistent with the Department's Water Quality Toxics Management Strategy – Statement of Policy (Chapter 16), water quality standards regulations in Chapter 93, and water quality standards implementation regulations in Chapter 96.

Under sections 4 and 5 of the Clean Streams Law (CSL), the Department has the duty to formulate regulations that prevent and eliminate water pollution. "Pollution" is defined by the CSL as "contamination of any waters of the Commonwealth such as ... to render such waters harmful, detrimental or injurious to public health..., or to domestic, municipal, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life...." Section 1920-A of the Administrative Code of 1929 authorizes the Board to formulate, adopt, and promulgate such rules and regulations as may be determined by the Board for proper performance of the work of the Department. Where a pollutant found in discharges to surface waters is toxic to human health or aquatic life, the Commonwealth's regulations require development of appropriate water quality criteria to control pollution.

Furthermore, under the Pennsylvania Safe Drinking Water Act (35 P.S. §§ 721.3 and 721.5), public water suppliers must achieve a Secondary Maximum Contaminant Level (SMCL) for manganese of 0.05 mg/L in finished water. The SMCL for manganese in Pennsylvania is based on the Federal standard found at 40 CFR § 143.3. By requiring lower concentrations of manganese in source waters, the new human health criterion of 0.3 mg/L applied in all surface waters of the Commonwealth is expected to assist public water suppliers with surface water sources to meet the manganese SMCL.

Chapter 96 – In the proposed rulemaking, Annex A included language which supported two alternative points of compliance for the proposed manganese criterion. The first alternative, consistent with Act 40 of 2017, proposed to move the point of compliance to the point of all existing or planned surface potable water supply withdrawals. The second alternative, consistent with the CSL, proposed to maintain the existing point of compliance in all surface waters (that is, at the point of discharge). The Department received public comment on both alternatives including comments from 804 commentators in support of maintaining the existing point of compliance at the point of discharge and 30 commentators in support of moving the point of compliance to downstream potable water supply withdrawals. Based upon the Department's comprehensive evaluation of the manganese water quality standard in accordance with all applicable laws and statutes and the overwhelming public support to maintain the existing point of compliance in all surface waters, the Department recommends maintaining the point of compliance for the manganese criterion in all surface waters consistent with § 96.3(c). In Annex A of the final rulemaking, the proposed language for the first alternative point of compliance has been struck from Chapter 96.

Affected Parties

All persons, groups, or entities with proposed or existing point source discharges of manganese into surface waters of the Commonwealth must comply with the regulation.

Persons who discharge wastewater containing manganese from mining activities will likely be affected by the change in the criterion and by its implementation at the point of discharge. Some mining operations will likely need to add treatment to meet the new limit. In addition to National Pollutant Discharge Elimination System (NPDES) permits for mine discharges, the Department conducted a review of non-mining NPDES-permitted discharges and found that other sectors currently have water quality-based effluent limits for manganese and may be affected by the regulation. These entities include landfills, wastewater treatment plants, public water systems, and power plants. These final amendments will be implemented through the Department's permitting and other approval actions.

Outreach and Advisory Committees

In response to a comment from the Independent Regulatory Review Commission (IRRC) on the proposed rulemaking, the Department met with the Mining and Reclamation Advisory Board (MRAB) on January 21, 2021 and the Aggregate Advisory Board on May 5, 2021 to discuss the proposed rulemaking and receive additional comments or information. The Department did not receive additional information or data from these boards in response to these meetings to inform the final-form rulemaking. The Department met again with MRAB on January 20, 2022 and the Aggregate Advisory Board on February 2, 2022 to discuss the draft final-form rulemaking. MRAB passed a motion to recommend that the Board not proceed with the final-form rulemaking. The Department also discussed the draft final-form rulemaking with the Public Water Systems Technical Assistance Center (TAC) Board on February 8, 2022, which voted to support advancing the final-form rulemaking to EQB for consideration.

The Department met with the Water Resources Advisory Committee (WRAC) on November 18, 2021 to discuss the draft final-form rulemaking. WRAC voted to concur with the Department's recommendation to present the final-form rulemaking to the Board. The Department provided a regulatory review to the Agricultural Advisory Board (AAB) on December 9, 2021, which included the draft final water quality standard for manganese.

Public Comment

The Board adopted the proposed rulemaking at the Board's December 17, 2019, meeting, and the proposed rulemaking was published in the *Pennsylvania Bulletin* on July 25, 2020 (50 Pa.B. 3742), with a 60-day public comment period that ended September 25, 2020. The Board held three virtual public hearings, for the purpose of accepting comments on the proposed rulemaking, on September 8, 9, and 10, 2020.

The Board received comments from 957 commentators including comments from EPA Region 3, testimony from 13 witnesses at the public hearings, and comments from IRRC. Generally supportive comments for the proposed rulemaking, including maintaining the point of compliance for the manganese criterion at the point of discharge, were received from 924 commentators. Comments that opposed the proposed manganese criterion, requested movement

of the point of compliance, or both were received from 34 commentators. The comments received on the proposed rulemaking are summarized in Section F of the preamble and in the comment and response document for this final-form rulemaking.

The majority of comments from the mining industry and other regulated entities supported the first alternative point of compliance and opposed the human health criterion and the second alternative point of compliance. These comments included the following topics: (1) general opposition to the 0.3 mg/L criterion; (2) the proposed criterion is unnecessary, unsupported, and overly protective of aquatic life and other water uses; (3) the second alternative point of compliance does not comply with Act 40; (4) moving the point of compliance to the point of potable water supply withdrawal benefits industry and does not impact public water systems; (5) manganese removal to a level of 0.3 mg/L would be very challenging and costly to achieve; and (6) the regulation will negatively impact remining and abandoned mine land reclamation activities as well as Chapter 102 permits for earth disturbance activities.

The majority of comments from the public water systems and other groups supported the human health criterion and the second alternative point of compliance and opposed the first alternative. These comments included the following topics: (1) general support for the 0.3 mg/L criterion; (2) general support for maintaining the point of compliance at the point of discharge; (3) general opposition to moving the point of compliance (Act 40); (4) moving the point of compliance (Act 40) shifts the burden of manganese treatment to public water systems and other downstream users; (5) source water concentrations of manganese ≥ 0.3 mg/L (EPA's lifetime health advisory limit) require treatment to remove the manganese and may trigger public notification requirements; (6) public water suppliers must achieve an SMCL of 0.05 mg/L in finished water; and (7) manganese removal treatment, which is expensive, will be necessary for many facilities if source water manganese levels at the point of withdrawal increase to 0.3 mg/L or higher.

The Department has considered all the public comments received on the proposed rulemaking in preparing this final-form rulemaking, and recommends the final-form rulemaking be revised from the proposed rulemaking as described in Section E of the preamble and as set forth in Annex A in this final-form rulemaking.

Recommendation to the Board

The Department recommends the Board adopt this final-form rulemaking.