



United States Steel Corporation
Law Department
600 Grant Street, Room 1500
Pittsburgh, PA 15219-2800
Phone: 412-433-2855
Fax: 412-433-2964
mamustian@uss.com

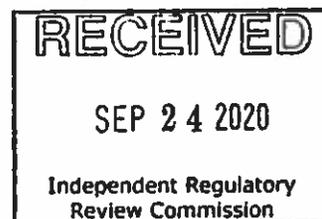
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Mark Mustian
Counsel - Environmental

September 25, 2020

VIA Electronic Submission to: RegComments@pa.gov

Environmental Quality Board
Rachel Carson State Office Building
16th Floor, 400 Market Street
Harrisburg, PA 17101-2301



**Re: Proposed Rulemaking, Environmental Quality Board [25 PA. CODE CHS. 93 & 96],
Water Quality Standard for Manganese and Implementation
Comments of United States Steel Corporation**

Dear Sir or Madam:

The United States Steel Corporation (U. S. Steel) respectfully submits the following comments regarding the proposed rulemaking to change manganese (Mn) water quality standards and their implementation in Pennsylvania (PA) Code, Title 25, Chapters 93 and 96. U. S. Steel has interest in this proposed rulemaking due to its presence in Pennsylvania. U. S. Steel is headquartered in Pennsylvania and has several operating entities in the state that would be subject to the proposed rulemaking.

Background – Proposed Manganese Criterion

In accordance with the October 30, 2017 amendment to Section 1920-A of the Administrative Code of 1929, otherwise known as “Act 40” (71 P.S. § 510-20(j)), the Pennsylvania Department of Environmental Protection (PADEP) is required to promulgate Mn criteria that shall be met at least 99% of the time at the point of all existing or planned potable water supply withdrawals from surface waters unless otherwise specified as described in 25 PA. Code § 96.3(d). In accordance with this mandate, PADEP proposed 1) the deletion of existing Mn numeric water quality criterion of 1.0 mg/L from Table 3 (PA. Code § 93.7), 2) adoption of an updated Mn human health criterion of 0.3 mg/L to Table 5 (PA. Code §93.8c), and 3) the potential identification of a new point of compliance for the proposed Mn criterion (PA. Code § 96.3).

The proposed 0.3 mg/L Mn value in Table 5 would be a more stringent criterion, replacing the existing Mn criterion of 1.0 mg /L as listed in Table 3. The existing Mn criterion of 1.0 mg /L is specific to waters with a Potable Water Supply designation. The final component of the proposed Mn rulemaking concerns two alternatives with respect to the point of compliance location. The first alternative would move the point of compliance to the water supply intake point, whereas the second alternative would maintain the current regulation for Mn criteria to be met in all surface waters (i.e., the point of compliance would be at effluent discharge).

Comments Regarding the Proposed Manganese Criterion

U. S. Steel respectfully wishes to submit the following comments regarding the proposed rulemaking:

- *Lowering the Proposed Criterion is Not Scientifically Justified*

U. S. Steel has reviewed a report that was prepared on behalf of the PA Coal Alliance for the proposed Mn rulemaking (Gradient 2020). In our scientific opinion, this report conclusively demonstrates that the existing PA water quality criteria of 1.0 mg/L provides appropriate protection of drinking water for human health consumption. The Gradient report argues that use of a “modifying factor” (MF) of 3 in the criteria derivation equation is not supported in the scientific literature. Without this MF of 3, 1.0 mg/L would adequately protect against drinking water exposures, even among different aged populations.

Gradient also conducted an independent evaluation of protective Mn concentrations for possible exposure pathways associated with recreational and fish-ingestion designated uses (Gradient 2020). Using an updated oral reference dose (RfD), Gradient derived conservative swimming and fish-ingestion concentrations of 92 mg Mn/L for an adult and 41 mg Mn/L for a child. These recreational and fish-ingestion values are more than 2 orders of magnitude greater than the 0.3 mg Mn/L human health value proposed by PADEP. U. S. Steel agrees with the scientific basis behind the Gradient analysis, and thus U. S. Steel concludes that the proposed PADEP human health value of 0.3 mg/L is more stringent than is needed to protect these designated uses.

- *The Point of Compliance Should be Moved to the Potable Water Intake, Because the Existing Criterion is Protective, and Does Not Need to be Lowered to Protect Other Uses.*

If PADEP requires “that this criterion should apply in all surface waters (i.e., at the point of discharge),” as stated in their 2019 executive summary to EQB (PADEP 2019), the human health Mn AWQC does not need to be lowered from 1.0 to 0.3 mg /L to be protective of aquatic life, livestock, recreational, and fish-ingestion uses. In the proposed rulemaking PADEP also states that “the adoption and implementation of a human health criterion in all surface waters in accordance with the proposed regulation should also provide adequate protection to aquatic life and livestock from the toxic effects of manganese” (PADEP 2020). While this statement that the proposed criterion “should also provide adequate protection to aquatic life and livestock” is accurate, the existing 1.0 mg/L Mn criterion is protective of both the mentioned designated uses.

U. S. Steel has reviewed, and supports, comments filed for this rulemaking by the North American Coal Corporation (NA Coal) which include a technical memorandum from GEI Consultants, Inc. (GEI) regarding the overprotective nature of the proposed human health criterion for other surface water uses. This memorandum (GEI 2020) conclusively demonstrates that lowering the human health criterion to 0.3 mg /L is far more stringent than is required to protect aquatic life uses. This is because the existing aquatic toxicity literature shows that even the most sensitive aquatic species (brook trout [*Salvelinus fontinalis*]) would be protected from

chronic exposures at as low as 2.7 mg/L. Furthermore, other states with Mn aquatic life protection standards (e.g., New Mexico, Colorado, Illinois, and Wyoming) use criteria up to 5x to 10x higher than PADEP's proposed criterion of 0.3 mg/L. Therefore, U. S. Steel concludes it is not necessary to reduce the human health criterion from 1.0 to 0.3 mg/L to protect aquatic life (and other uses; see GEI 2020).

As a result, U. S. Steel also recommends that the Environmental Quality Board (EQB) adopt the "First Alternative Point of Compliance" which would change the point of compliance for Mn in Chapter 96 to being met "at the point of all existing or planned surface potable water supply withdrawals" (§ 96.3(d)). PADEP's primary motivation for considering maintaining the current point of compliance in all surface waters (i.e., at the point of discharge) is that the lower criterion of 0.3 mg/L is needed to protect aquatic life and other surface water uses. As noted above, lowering the criterion is not needed, and so moving the compliance point to the point of potable water intake makes the most sense, is protective of the aquatic environment, and does not unnecessarily place the economic burden of excessive treatment to dischargers. U. S. Steel also notes that, as summarized in GEI (2020), all neighboring states to PA either do not have manganese water quality standards, or if they do, the point of compliance is at the point of potable water withdrawal. Therefore, U. S. Steel supports the First Alternative Point of Compliance as stated in the proposed rulemaking.

- *The Proposed Criterion is Redundant*

Pennsylvania already has a drinking water secondary maximum contaminant limit (MCL) for Mn of 0.05 mg/L that is more stringent than the proposed human health criterion. The secondary MCL, which is based on USEPA guidelines for taste and color, is a limit targeted at the primary exposure route that all public water systems in Pennsylvania are already required to meet. In other words, whether the EQB adopts the proposed human health criterion of 0.3 mg /L or retains the existing 1.0 mg /L for Potable Water Supply designated uses, all public water systems would still need to supply drinking water that meets the more stringent Mn secondary MCL as written in 25 Pa. Code § 109.202(b)(1). U. S. Steel also recognizes that most surface and drinking water quality standards across the U.S. are based on this secondary MCL for taste and odor, and not human health or toxic effects. Therefore, PADEP would be setting a precedent that is not needed to protect human health or the environment.

- *Implementation Concerns*

The proposed rulemaking supporting documents lack sufficient explanation of how the revised criterion would be implemented in NPDES permits. The discussions on page 10 of the proposed rulemaking document are not clear as to whether or how assessments of intakes on water bodies downstream of the discharger's receiving stream would be evaluated in the context of WQBEL development. See excerpt below from the proposed rulemaking document regarding the alternative of applying the criterion only at the point of potable water withdrawal:

Under this alternative the proposed human health criterion for manganese will not apply unless a potable water supply withdrawal is located on the surface water. If a potable water supply is located on the stream, a discharger's point of compliance with

the proposed manganese criterion will be modelled from the upstream point of discharge to the point of potable water supply withdrawal, allowing for attenuation of the effluent as it travels downstream. The discharger's effluent limitation would be determined based on achieving the proposed manganese criterion of 0.3 mg/L at the point of potable water supply intake.

The statement is not clear as to whether “the surface water” and “point of water supply withdrawal” means only the receiving stream of the permittee’s discharge, or intakes on downstream water bodies as well. A more specific and clearer explanation is required for stakeholders to adequately assess the proposed revision.

U. S. Steel appreciates the opportunity to submit these comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'M Mustian', is placed over a light gray rectangular background.

Mark Mustian, Esq.
Counsel – Environmental
United States Steel Corporation

References

GEI Consultants, Inc. (GEI). 2020. Technical Memorandum, Comments on Proposed Rulemaking: Water Quality Standards for Manganese and Implementation (#7-553). Prepared on behalf of North American Coal Corporation.

Gradient. 2020. Comments on the Proposed Pennsylvania Ambient Water Quality Criterion for Manganese: Prepared for Pennsylvania Coal Alliance. July 28, 2020.