

EMBARGOED MATERIAL**CLIFFS**

September 14, 2022

RECEIVEDVia Electronic Submission to irrc@irrc.state.pa.us

SEP 14 2022

Independent Regulatory Review Commission
333 Market Street, 14th Floor
Harrisburg, PA 17101Independent Regulatory
Review Commission

**Re: Regulation #7-553: Water Quality Standards for Manganese and Implementation
Pennsylvania Department of Environmental Protection
25 PA Code Chapters 93 and 96
PA Bulletin Publish Date: July 25, 2022
Close of Public Comment: September 25, 2022
IRCC Comments Due: October 26, 2022**

Dear Sir or Madam:

Cleveland-Cliffs Inc. (Cleveland-Cliffs) is pleased to submit comments to the Independent Regulatory Review Commission (IRRC) on the Pennsylvania Department of Environmental Protection's (DEP's) proposed regulation #7-553 for manganese water quality standards and implementation of those standards through 25 PA Code Chapters 93 and 96, respectively. The DEP has proposed to establish a human health water criterion of 0.3 mg/L for manganese that would apply to all waters (i.e., at the point of discharge) in accordance with the DEP Water Quality Toxics Management Strategy (25 PA Code Chapter 16) and regulations found at 25 PA Code Chapter 93 (relating to water quality standards) and Chapter 96 (relating to water quality standards implementation).¹

Cleveland-Cliffs owns and operates a four non-integrated steel mills, several permitted mine drainage treatment facilities, and other facilities that are located within the Commonwealth of Pennsylvania. These facilities are regulated by NPDES permits issued by the DEP that could be impacted by the proposed manganese regulation. Accordingly, Cleveland-Cliffs has considerable interest in this rulemaking.

Cleveland-Cliffs supports strong environmental stewardship at our facilities and full compliance with NPDES permits and water quality standards. In concert with that commitment, Cleveland-Cliffs supports the development of water quality regulations and discharge permits that are based on the best and most recent scientific information available and sound implementation policies.

¹ PA Department of Environmental Protection, Bureau of Clean Water, *Rationale, Development of the Human Health Criterion for Manganese, Executive Summary*. (undated).
[https://files.dep.state.pa.us/PublicParticipation/Public%20Participation%20Center/PubPartCenterPortalFiles/Environmental%20Quality%20Board/2019/December%202017/7-553 WQS Mn Proposed/05 7-553 WQS Mn Proposed Rationale.pdf](https://files.dep.state.pa.us/PublicParticipation/Public%20Participation%20Center/PubPartCenterPortalFiles/Environmental%20Quality%20Board/2019/December%202017/7-553%20WQS%20Mn%20Proposed/05%207-553%20WQS%20Mn%20Proposed%20Rationale.pdf)

Cleveland-Cliffs appreciates efforts by the DEP to develop this regulation; however, the rationale for the proposed regulation is deficient in areas described below. Accordingly, Cleveland-Cliffs respectfully requests that IRRC disapprove the proposed manganese regulation and provide DEP with the opportunity to carefully consider recent science and technical factors which support the current Pennsylvania manganese water quality criterion of 1.0 mg/L.

As noted in the September 12, 2022 comments to the IRRC submitted by the Manganese Interest Group (MIG), of which Cleveland-Cliffs is a member, the DEP has discounted the utility of human physiologically-based pharmacokinetic (PBPK) models for assessing toxicity associated with low-level exposure to manganese. Recent research conducted under the auspices of and in cooperation with the U.S. Environmental Protection Agency (US EPA) does not support lowering the Pennsylvania human health water quality standard for manganese from 1.0 mg/L to 0.3 mg/L. This is more fully detailed in the comments submitted by MIG and in the cited references, which are incorporated herein by reference. In addition, Cleveland-Cliffs agrees with and supports the comments made by the Pennsylvania Coal Alliance (PCA) regarding this proposed rulemaking, which are also incorporated herein by reference.

Cleveland-Cliffs questions DEP's use of a conservative modifying factor (MF) of 3 for calculating the modified manganese reference dose (RfD) of 0.05 mg/kg-day, which led to the proposed manganese water quality criterion of 0.3 mg/L. Use of a MF accounts for uncertainty in the calculation of a RfD. The recent scientific literature provided by the PCA does not support use of a MF of 3. When eliminating the modifying factor of 3, and using all other DEP inputs for calculating the RfD, the resulting calculated criterion value is essentially equivalent to the existing criterion of 1.0 mg/L. Therefore, in accordance with PCA's comments (Gradient 2020), revisions to the manganese water quality criterion for human health are not scientifically supported or warranted.

Furthermore, as noted in footnote 1 of DEP's rationale document, Pennsylvania has adopted the US EPA secondary maximum contaminant level (SMCL) of 0.05 mg/L as an enforceable standard for manganese that applies to potable drinking water for protection against color and taste in finished water (25 PA Code Chapter 109). Thus, by implementing and enforcing the manganese SMCL, DEP is effectively regulating actual human consumption of manganese through drinking water.

Thank you for providing the opportunity for public review and comment on Proposed Regulation #7-553. As noted above, Cleveland-Cliffs respectfully requests that IRRC disapprove the proposed manganese regulation and provide DEP with the opportunity to carefully consider recent science that supports the current Pennsylvania manganese water quality criterion of 1.0 mg/L.

Sincerely,



Julianne Kurdila, Program Manager, Environmental Policy
Cleveland-Cliffs Inc.



Shenango, LLC

September 14, 2022

Independent Regulatory Review Commission
14th Floor Conference Room 333 Market Street
Harrisburg, PA 17101

Submitted via e-mail to: irrc@irrc.state.pa.us

RECEIVED

SEP 14 2022

Independent Regulatory
Review Commission

Re: Environmental Quality Board Final Rulemaking - Regulation #7-553, Water Quality Standard for Manganese and Implementation

Dear Sir or Madam:

Shenango, LLC offers the following comments on the Environmental Quality Board Final Rulemaking – Regulation #7-553, Water Quality Standard for Manganese and Implementation.

Shenango, LLC operates mine drainage treatment systems to comply with NPDES permit effluent limits imposed on seven postmining pollutional discharges that resulted from surface coal mines. These treatment systems operation and maintenance as well as capital costs incurred are funded by a trust. Shenango, LLC has no active mining operations and has made a commitment to manage these seven postmining sites in compliance with applicable regulations.

Shenango requests your disapproval of the Final Rulemaking – Regulation #7-553, Water Quality Standard for Manganese and Implementation, which amends Chapters 93 and 96 or 25 Pennsylvania Code. This rule imposes compliance requirements that do not comply with Pennsylvania’s Act 40 of 2017 or the Regulatory Review Act. The rule increases costs, including for consulting services, significantly for Shenango, LLC. The rule also is not reasonable as the requirements do not address a significant environmental challenge and will be difficult to implement for each passive treatment system.

This rule imposes compliance requirements that do not comply with Pennsylvania’s Act 40 of 2017 or the Regulatory Review Act.

Act 40 of 2017 directed the Environmental Quality Board to promulgate regulations listing manganese under 25 Pa. Code 96.3(d), to clarify that the water quality criteria found in Chapter 93 (1.0 mg/L) related to water bodies with the potable water supply designation apply at the point of existing or planned potable water supply withdrawals and not the point of discharge. Contrary to the direction and legislative intent of the General Assembly, the Pennsylvania Department of Environmental Protection proposed a regulation that recategorized manganese as



a toxic substance, modified the water quality standard, and moved the point of compliance to the point of discharge. The Independent Regulatory Review Commission is charged with determining whether a regulation is consistent with the intent of the General Assembly. The manganese rulemaking is wholly inconsistent with Act 40 of 2017, and therefore, is inconsistent with legislative intent.

The rule increases costs, including for consulting services, significantly for Shenango, LLC. Currently, two of the seven sites are required to meet manganese effluent limitations. With this rule all seven sites will be required to meet the new manganese limit. The present-day capital cost for all seven systems is approximately \$650,000. Adding manganese limits on the five other discharges, an additional investment approximately equal to the current capital value of the existing treatment systems will be needed, effectively increasing the treatment costs by 100%. Related costs including maintenance and recapitalization would also increase commensurately. Costs for implementing this regulation will be over \$1.2 million. There will be additional consulting service costs to help manage and implement the systems. Funds will also be required in the trust account to operate and maintain these changes to cover expenses in future years. Shenango, LLC does not have readily available funds to cover this shortfall both for the initial and recurring costs. It is currently funded to manage the treatment systems and maintain compliance with existing discharge limitations. The trust fund did not contemplate such a change in effluent limits that are expected to add significant costs to manage.

Manganese removal in passive treatment systems requires the iron concentration to be reduced to less than 1 mg/L, well below the standard effluent limit for mine discharges of 3.0 mg/L, prior to entering a component specifically designed to remove manganese. These additional treatment components require significant quantities of limestone and land area. Many treatment sites do not include viable construction area within the existing permit boundary. In the case of the Shenango water treatment sites, adding a restrictive manganese effluent limit at the point of mine site discharge will require significant redesign and expansion of most of the treatment systems. If this land is commercially available, it will add to the cost of implementation. If the land is not commercially available, it is not feasible to expand these ponds to meet the new limits. In addition, area that is currently wooded and provides wildlife habitat would need to be sacrificed to accommodate additional rock-filled treatment ponds.

Though the seven treatment systems operated by Shenango achieve permit compliance with passive technology, it is well known that active treatment systems that use chemicals to remove manganese are subject to similar cost increases. Watzlaf 1988 reported that manganese removal can increase the chemical reagent cost by 140 – 180%, at least doubling and almost tripling the cost for chemical treatment when compared to the cost needed to achieve a circumneutral pH with compliant iron concentrations.



Shenango, LLC

The rule also is not reasonable as the requirements do not address a significant environmental challenge and will be difficult to implement for each passive treatment system.

Shenango LLC does not agree with statements in the rule asserting that “current data and science demonstrate” that it is necessary to lower the water quality standard to 0.3 mg/l to protect human health from the neurotoxicological effects of manganese. As the notice itself acknowledges, US EPA has not published a human health criterion for manganese, nor have they proposed a health-based drinking water standard for manganese. Rather, US EPA relies instead on a secondary drinking water standard for manganese that addresses only aesthetic concerns such as taste and odor.

Due to the factors cited above, Shenango, LLC requests your disapproval of the final rulemaking.

Sincerely,

Robert Sanch
Environmental Supervisor
Shenango, LLC

Reference cited:

Watzlaf GR, 1988. Chemical Stability of Manganese and Other Metals. Proceedings of the American

Society of Mining and Reclamation. <http://doi.org/10.21000/JASMR88010083>.