



August 30, 2022

Michael W. Smith, P.G.
1308 Springfield Cir.
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Independent Regulatory Review Commission via email

Re: Comments on proposed change to 25 PA Code Chapter 93, in-stream criteria for manganese

Dear IRCC:

I was DEP's District Mining Manager at the Moshannon District Office from 1991 through 2017 and would like to comment on the proposed change to manganese (Mn) treatment levels and the in-stream Mn criterion currently up for review by the IRCC. As District Mining Manager, I was responsible for active mining operations in an 11-county area of northcentral Pennsylvania as well as the operation of mine drainage treatment plants at forfeited ABS (alternate bond system) mining operations. I believe that implementing the proposed regulation change is not in the public interest and will cause significant economic impacts to the public and to industry while resulting in little if any gain to the public and the environment. My specific reasons are listed below:

1. The proposed regulation imposes unnecessary economic costs on PA industry and the public. Treatment costs at active (operated by industry) and abandoned mine drainage treatment plants (operated by DEP) will increase dramatically because Mn is very difficult to remove at the proposed levels. Many treatment operations currently use passive treatment technology rather than chemical treatment, which is much more expensive. But passive treatment is frequently not capable of treating to this level due to physical site constraints and other factors. Even chemical treatment systems may be challenged to achieve the increased treatment level needed. Many ABS systems are operated by DEP which will require a large amount of additional public funds in order to achieve the higher level of treatment.
2. There is little, if any, benefit to the public for requiring higher levels of treatment. The current in-stream Mn criterion is 1.0 mg/l which has adequately protected aquatic life (studies generally point to a much higher number but an appropriate aquatic-life based standard has not been determined). My experience has been chiefly with the West Branch of the Susquehanna Watershed, which drains most of northcentral Pennsylvania. The first public water intake is far below any coal mining operations near the city of Williamsport (surface water intake locations are considered to be sensitive data and not generally available to the public). The mean in-stream Mn concentration, according to DEP's 2009 TMDL report, is 0.28 mg/l, already below the proposed criterion of 0.3 mg/l. Statewide, the number of intakes which would significantly

benefit from a reduced in-stream Mn limit is small. Rather than apply the proposed 0.3 mg/l in-stream limit to all stream reaches, it would make much more sense, and have vastly lower cost, to apply this limit to stream reaches with an active or proposed public water intake.

3. The proposed regulation will cause an increase in mining bond forfeitures and cause DEP to assume operation of underfunded treatment systems. Increasing Mn treatment requirements will cause many active treatment systems to greatly increase operating costs and increase the amount of money which must be set aside either as trust funds or bonds to assure continued operation of these treatment systems, which for most post-mining discharges will have to be treated in perpetuity. Many operators will not be able to afford these costs and will likely walk away from their operations and leave the public “holding the bag” without adequate funds to continue treatment operations. Further, many active operations which would otherwise be considered successful because no postmining Mn treatment is required, may now have to treat for manganese in perpetuity, resulting in long-term treatment obligations, the requirement to post long-term financial assurance, and will not be eligible for release of reclamation bonds.
4. The proposed regulation will have a chilling effect on future remining operations which will greatly limit industry reclamation of abandoned mined lands and AMD remediation through remining. Remining is the practice of reentering abandoned surface and underground mines to extract remaining coal reserves. Through remining, thousands of acres of abandoned mined lands have been reclaimed to current standards and many miles of acid mine drainage impaired streams have been restored in Pennsylvania. Although remining is very effective at neutralizing acidity and reducing iron and aluminum levels, it is not particularly effective at remediating Mn and at times (particularly with remining abandoned underground mines) can cause a modest increase in manganese concentrations despite best practices. The proposed regulation will undoubtedly cause many potential reclamation sites to be avoided due to the high risk of increasing Mn concentration, no matter how slightly, and incurring long-term treatment liability. The opportunity lost for public benefit of reclamation and acidity abatement could be substantial. DEP, in its comment response document, misapplied EPA’s 2008 report on Mn limits where it concluded that bond forfeitures due to Mn were rare, and cited a 1% bond forfeiture rate for remining operations in Pennsylvania. The 1% forfeiture rate was true only to the extent that the original in-stream Mn limit was applied. If the in-stream Mn limit is reduced from 1.0 mg/l to 0.3 mg/l, a much higher level of bond forfeitures due to Mn can be expected.

In summary, given the expense to industry and the public of achieving a higher level of Mn treatment, the limited, if any, benefit to public health and safety, and the chilling effect to future remining operations, there is no compelling reason to reduce the in-stream Mn limit to 0.3 mg/l. The proposed regulation is unreasonable and should not be approved by the IRCC.