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August 13, 2012

Environmental Quality Board
PO Box 8477
Harrisburg, PA 17105-8477

2012 SEP -5 PM 4: 27

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IRRC

Re: Triennial Review of Water Quality Standards

Members of the Board:

Hart Resource Technologies, Inc and Pennsylvania Brine Treatment, Inc would like to submit the following comments on the Triennial Review of Water Quality Standards, 25 PA Code Chapter 93 which were published in the Pennsylvania Bulletin on July 16, 2012.

1. Duplication of Existing Regulations for Chloride:

The Board is recommending changing the chloride criteria from 250 mg/l applied at the nearest potable water intake to an in-stream, equation based aquatic life criteria based on the hardness and sulfate concentrations of the receiving stream.

From 2010 to the present, the emphasis of the triennial review of aquatic life standards has been on reducing the chlorides, sulfates, and Total Dissolved Solids (TDS) generated by the discharge of treated Marcellus fluids from Centralized Waste Treatment Facilities (CWT) and POTW's. This is evidenced in DEP's "*Background of Chloride Criteria*" rationale that cites an analytical study on Marcellus fluids¹. It was also mentioned by EPA in a letter to DEP from EPA's Water Protection Division, stating that during the PADEP's triennial review: "EPA requests that PADEP remove the implementation procedures provision, or at least exclude TDS, chloride and sulfate from the list of exceptions. This will facilitate the inclusion of these criteria in permits and the assessment of the state waters in light of the increasing wastestreams from the drilling operations."²

On August 21, 2010, DEP instituted 25 PA Code 95.10 which was justified in the IRRC Regulatory Review by stating that: "the EPA has established effluent limits for Centralized Waste Treatment Facilities, which have been incorporated by reference into this proposed rulemaking; however those regulations address a number of parameters, but not the major parameters of concern - TDS, chlorides and sulfates. There are specific industry effluent limitation guidelines that may address TDS, sulfates, chlorides in Federal Regulation. Pennsylvania currently has TDS, Sulfate and Chloride criteria to protect

¹ Hays, T. 2009. *Sampling and Analysis of Water Streams Associated with the Development of Marcellus Shale Gas*.

² May 12, 2011 letter from Jon Capacasa, EPA Water Protection Division to Kelly Heffner DEP Acting Deputy Secretary for Water Management, Page 1.

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potable water supplies but no criteria for these parameters to protect aquatic life. The Clean Streams Law requires the Department to implement regulations to protect streams from potential sources of pollution, this regulation is designed to meet that purpose (emphasis added).³

Chapter 95.10 established end-of pipe limits for TDS (500 mg/l), as well as chloride (250 mg/l) for any new or expanded discharges containing high concentrations of TDS. Although CWT and POTW facilities were grandfathered in under this regulation, on April 19, 2011 DEP Secretary Krancer called for oil and gas companies using these facilities for disposal of Marcellus fluids to stop utilizing disposal at surface water discharge plants. Consequently the CWT and POTW facilities that were treating fluids from Marcellus production were severely limited in the fluids that were being delivered to the facilities. This in turn greatly decreased the amount of high TDS/chloride fluids being discharged to PA's streams. Therefore by instituting Chapter 95.10, DEP has already applied a chloride standard to the regulated community and addressed the problem of high chlorides that were generated by treatment of Marcellus fluids.

In addition, aquatic life is already protected by the current in-stream osmotic pressure water quality standard of 50 mOsm/kg. This standard is protective of aquatic life by taking into account not only the chlorides that are present in both the discharge and the receiving stream, but also the presence of other dissolved ions (sulfates, nitrates, carbonates, sodium, potassium, calcium, and magnesium). This regulation is currently applicable to all waters of the Commonwealth.

2. Economic Impacts of Proposed Regulations:

Section 5 of the Clean Streams Law instructs DEP to consider the "immediate and long-range economic impact upon the Commonwealth and its citizens."⁴ The establishment of an additional chloride standard will have a devastating effect on the conventional natural gas industry that will also directly affect the service industries that support the conventional industry. Although Marcellus producers have options for recycling of their flowback fluids, the conventional industry has no such option due to the nature of well placement and drilling schedules. Since many conventional wells are already marginal producers, any additional expense for fluid disposal will create an economic hardship that the industry can not recover from.

Hart Resource Technologies and Pennsylvania Brine Treatment are support industries for the oil and gas industry. With the April 2011 declaration by Secretary Krancer, our business was decreased by 64% when companies couldn't dispose of their Marcellus fluids at our facilities. Other CWT facilities and POTW's have also suffered the same fate, if not total closure. Along with the decrease in business, our company lost 26% of our workforce, as well as the inability to support local businesses, charities, and associations.

³ IRRC Regulatory Analysis Form submitted to the Independent Regulatory Review Commission dated May 17, 2010.

⁴ Clean Streams Law, Act of 1937, 35 P.S. § 691.5 (a).

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We predict that imposing an additional chloride regulation on our facilities will shut down one of the three facilities (with a loss of 6 jobs) and severely limit the discharge from a second plant. The costs of constructing and maintaining new technology to comply with the proposed chloride limits are also extremely high. Not only will this impact our facilities, but the conventional oil and gas industry will be affected by the inability to dispose of their production fluids in a cost effective manner. Although additional technology can be incorporated to attain lower TDS/Chloride discharges, disposal costs for the conventional industry would triple, or in some cases be further increased if fluids would have to be transported to injection wells in Ohio for disposal.

In addition to the increased costs of compliance for dischargers, DEP will need to evaluate the costs associated with reviving its Water Quality Network across the State in order to establish receiving stream hardness and sulfate criteria (and background chloride analysis) to be used to calculate chloride limits for all NPDES permits. If DEP's proposal of using Iowa's chloride standard is based on using "sound science", then this same science needs to be extended to the calculation of chloride limits for NPDES dischargers.

We believe that further background analysis of in-stream chloride concentrations, in conjunction with the hardness and sulfate levels across the State, is needed to properly identify whether the development of a new chloride standard is justified. The DEP is proposing to adopt the same equation-based aquatic life criteria as implemented in Iowa, however before adopting this standard, Iowa conducted a "state-wide TDS, chloride, (and sulfate) monitoring program in an effort to build a data base for use in the economic impact analysis of any future TDS and chloride standards."⁵ Until this investigation is completed on all streams in Pennsylvania, not just the Monongahela River watershed and Dunkard Creek as indicated in the Environmental Quality Board Meeting Minutes of April 17, 2012⁶, the costs of compliance with the new standard outweigh the perceived benefits of protection of aquatic life that may or may not be threatened in streams across the Commonwealth.

Thank you for the opportunity to comment on the proposed Chapter 93 Water Quality Standards Triennial Review. Our companies have been operating since 1985 and have worked closely with DEP in the past on environmental issues. We hope to continue that cooperation in the future.

Sincerely,



Becky Snyder
Operations Manager

⁵ Sindt, Gregory. *Chloride and TDS Water Quality Standards Update*. January 2008.

⁶ Minutes of Environmental Quality Board Meeting, April 17, 2012. Consideration of Proposed Rulemaking: Triennial Review of Water Quality Standards. Page 2.

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