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INDEPENDENT REGULATORY
Pocono Northeast
Resource Conservation & Development Council

ENVIRONMENTAL QUALITY BOARD

January 31, 2010

Environmental Quality Board
PO Box 8477
Harrisburg, PA 17105-8477
RE: 25 PA Code Ch. 95 Wastewater Treatment Requirements

To Whom It May Concern:

It is critical that our state government take a long-term and proactive action in the establishment of discharge criteria for industrial discharges in the Commonwealth of Pennsylvania. Discharges that contain high salinity and may contain trace levels of metals, organics, and other materials, or substances that may pose an unidentified synergistic reaction or impact, should be thoroughly covered. With the rapid increase of Marcellus Shale and Black Shale Development, special attention should be given to flowback, production, and brine water discharge activity. The communities and businesses within Pennsylvania rely on our freshwater resources for potable water, recreational and wildlife habitat, and to support ecotourism. With these concerns in mind, the Pocono Northeast Resource, Conservation & Development Council is strongly encouraging the following recommendations related to the proposed revisions to "25 PA Code Ch. 95 Wastewater Treatment Requirements."

Baseline Data

1. The maximum daily effluent concentration and mass loading should be established based on base-flow conditions, and it should take into consideration the impacts associated from up-gradient sources of point / non-point pollution with the primary goal of maintaining a TDS of not more than 500 mg/L in stream at the point of discharge. For sulfates and chlorides, the permit should establish a maximum in-stream concentration at the point of discharge of 250 mg/L, and it would be advisable to develop enhanced standards for oxygen, biological oxygen demand, sodium, and other key water quality parameters. These additional standards should be established because the increased salinity will alter the solubility and rate of natural re-aeration.
2. Because most of our freshwater systems are low in alkalinity, the effluent criteria should evaluate the potential for the formation of chemical precipitates that result in reducing the alkalinity of the receiving water.
3. It would be advisable to conduct biological toxicity testing of each waste stream to identify unanticipated synergistic affects or the possibility for bioaccumulation.



Permitting Process

1. The permitting process should require establishment of the baseline quality of the waste stream. The waste characterization should include a suite of biological, organic, major cations/anions, radionuclides, and other parameters that are specific to the industrial process and chemicals used in the development activity. For Marcellus Shale operations, this would include a characterization of the flow back, production, and brine water effluent, and include a detailed accounting of the types and quantity of chemicals used in the process.
2. The permitting process should be designed to encourage industrial users to reuse and recycle water and segregate waste streams. The waste streams should be segregated at the treatment facility.
3. Since each Marcellus Shale drilling operation is unique, the permitting process should require characterization of each waste stream from each well pad. The permitting process should also require the applicant to submit a copy of the hydraulic fracture sequence, chemical type and quantity used, detailed MSDS sheets, and other information characterizing the waste.
4. The permitting process should be divided into industry specific categories that take into consideration the fluid characteristics, volume, and impacts of each waste stream.
5. The permitting process should include a requirement for cradle to grave tracking of water used in each operation and the wastes generated by the respective operation. This requirement would provide for detailed accounting of the water and waste generated by a project. This effort should be coordinated with the SRBC or DRBC.
6. The permitting process should address issues and concerns related to aquatic invasive species and require proper disinfection and treatment of vehicles and other containers used to convey the wastewater.

Permit Fees

1. Permit fees should be set at a level to provide and fund long-term up-gradient and down-gradient monitoring for biological and chemical parameters. This monitoring should also include monitoring areas immediately up-gradient of potable water intakes, and the funding should facilitate the access to real-time monitoring data for communities and water suppliers to help fund the research and development of innovative treatment or water reuse systems to manage this water.

Treatment Plants

1. The treatment plant permit needs to include controls to inhibit the growth of aquatic invasive species in holding tanks, equalization tanks, or other treatment tanks used to store or process the brine, frac, or process water. If the system does not prevent the growth of these invasive species, the holding tanks or equalization systems will become a suitable environment for these organisms to become established within the watershed.

If you have any questions or comments, please contact the Pocono RC&D Council at 570-282-8732 ext. 604.

Respectfully submitted,



Mr. Brian Oram, PG
Chairperson, Pocono Northeast RC&D Council
<http://www.pnercd.org>