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2013 JUN 18 AM 9:00

June 17, 2013

Dear Members of the Independent Regulatory Review Commission,

As organizations concerned with protecting Pennsylvania water resources, we are writing to express our concern regarding the final-form Triennial Review of Water Quality Standards (IRRC #2954). We urge IRRC to reject the Triennial Review in its current form, due to the removal without justification from the draft proposed Triennial Review of several standards for contaminants impacting water quality in our state.

Chlorides:

The most glaring and critical correction needs to be with regards to the failure to set an aquatic life criteria for chlorides. While Pennsylvania has a potable water standard for chlorides, this only applies at the point of water withdrawal, not the point of discharge. As a result freshwater aquatic life in many miles of streams in Pennsylvania are left unprotected from substantial discharges of chlorides, a substance long known to be toxic to freshwater aquatic species.

DEP has now twice proposed an aquatic life standard for chlorides and twice failed to include this contaminant in their final version of the Triennial Review, both in 2010 and now in 2013. While there are a number of sources of chlorides into our rivers, oil and gas wastewater contains some of the highest concentrations of chlorides (3 to 6 times saltier than seawater) and is being produced in increasing volumes in the state. The lack of an aquatic life protection standard for chlorides since the beginning of Marcellus Shale gas extraction began in a significant way in 2007 has been a gaping hole in protection from oil and gas wastewater, either from direct discharge, indirect discharges, spills, and non-point runoff.

Although DEP did finalize in 2010 the wastewater treatment standards in their revisions to Chapter 95 to address some future chloride discharges, it grandfathered many others and does not address other possible threats from chloride contamination. As DEP describes in its comment response document:

“[T]reatment requirements apply only to effluent, not to instream water quality.

Instream concentrations of chloride or sulfate that are deleterious to aquatic life and human health are not prevented by setting treatment requirements on certain point sources. The treatment requirements do not apply to all point sources, and do not address nonpoint sources.” (DEP Comment Response document, p. 21)

While you will commonly hear that discharge of oil and gas wastewater into our rivers is a thing of the past, this is not supported by DEP’s actual documentation of major chloride discharges. As an example of this, below is a list of four facilities in the western part of the state that have reported major chloride discharges to DEP for a number of years, up to the present.

Jan. 2013 chloride discharges

Facility / NPDES Permit #	County	Concentration	Mass	Flow
Hart Resources Tech. – Creekside / PA0095443-A1	Indiana	74,450 mg/L	11,184 lbs/day	18,000 gallons/day
PA Brine – Josephine / PA0095273	Indiana	87,350 mg/L	112,990 lbs/day	155,000 gallons/day
PA Brine – Franklin / PA0101508	Venango	46,301 mg/L	115,920 lbs/day	300,000 gallons/day
Waste Treatment Corp. / PA0102784	Warren	71,760 mg/L	125,162 lbs/day	209,000 gallons/day
		TOTAL:	365,256 lbs/day	682,000 gallons/day

Data from DEP’s eDMR system found at: <http://www.ahs.dep.state.pa.us/NRS/>

In just one month, these four facilities discharged over 10 million pounds of chlorides into surface water. The concentrations of salts in these discharges is over twice as salty as seawater. We do not claim to have compiled a complete list of chloride dischargers but give these facilities as examples of the need to establish a protective water quality standard.

Neither DEP’s efforts to get the oil and gas industry to voluntarily stop these discharges, nor DEP’s permitting program for these dischargers has resulted in a halt to these large scale discharges of chlorides. While there are still questions as to the origination of these oil and gas wastewaters, this is not relevant to the establishment of a protective water quality standard for chlorides.

Further, DEP has itself studied the impact on aquatic life from the discharge from at least one of these facilities. On January 10, 2013, DEP staff submitted to David Balog, Environmental Engineering Manager, Clean Water Program, DEP Northwest Regional Office, the results of an Aquatic Biology Investigation they have been conducting into the impacts of the Waste Treatment Corporation (WTC) discharge of oil and gas wastewater into the Allegheny River in Warren, PA. DEP sampling downstream of the WTC discharge found chloride levels in the river

ranging from 1,000 – 8,000 mg/L. DEP examined the impact on aquatic life in the river and reached the following conclusion:

“The IBI scores and the change in macroinvertebrate community structure at the two sites downstream of the WTC outfall indicate the discharge is negatively affecting the Allegheny River... The study did not determine or quantify the length of impairment emanating from the WTC discharge.” (p. 9)

DEP’s own study provides a real life example of why we need a chloride water quality standard to protect aquatic life in Pennsylvania’s rivers and streams.

Finally, DEP itself has not provided any scientific justification or data to rationalize the removal of their proposed chloride water quality standard. DEP based its draft chloride standard on a standard that Iowa developed in coordination with EPA. DEP explains their reason for now withdrawing their proposal as follows:

“The Department is recommending the Board withdraw the chloride criteria, not because the Iowa criterion is flawed but rather it is not completely applicable statewide to the ionic composition found in the waters of the Commonwealth.” (DEP Comment Response document, p. 19)

In other words DEP thinks that it is possible that there are streams in Pennsylvania that the Iowa standard may not be appropriate for. However, DEP has presented no scientific studies or even any data to support this idea. DEP does not define in any quantifiable or specific way what stream composition would result in the standard being “not completely applicable”. **Given the absence of any data to support DEP’s assertion, the IRRC should reject the final-form Triennial Review because of DEP’s arbitrary removal of the draft chloride standard in the final Triennial Review.**

If in the future DEP gathers data that supports their assertion, there can be revisions to the chloride standard in future Triennial Reviews. **Given the absence of any data to support DEP’s assertion, the IRRC should reject the final-form Triennial Review and recommend that DEP include their draft chloride standard in the final Triennial Review.**

Sulfates:

There is also a clear need for a sulfate water quality standard in Pennsylvania, and we object to DEP’s removal of sulfates from the Triennial Review. Sulfates are discharged in large quantities by coal mines, power plants, and a number of other industries, and data from DEP’s sampling in the Monongahela River watershed indicates that there are significant issues for protecting aquatic life from sulfate discharges.

Similar to chlorides, DEP is attempting to argue that there is evidence that Pennsylvania stream composition is potentially not always appropriate for the draft sulfate standard (in fact it seems possible that the verbal comments by Dr. Soucek, not contained in any record, are solely related to sulfate and can not be also applied to chloride toxicity as DEP is attempting to argue). Again,

similar to chlorides, DEP has not presented specific or quantifiable data regarding under what circumstances the draft sulfate standard could not be appropriately applied. **Given the lack of evidence to support DEP's assertion, we urge the IRRC to reject the final-form Triennial Review and recommend DEP to include the draft sulfate standard in the final Triennial Review.**

1,4 Dioxane:

DEP has provided no rationale for withdrawing their proposed state water quality standard for this hazardous and carcinogenic chemical. 1,4 Dioxane is used in a variety of industries and is present in a number of state waste sites. DEP's Comment Response document indicates that they utilized the most current science to develop the standard, and did not acknowledge any weaknesses with their data sources to support the proposed standard. **The proposed 1,4 Dioxane standard should be retained in the final Triennial Review.**

Bromides:

We would like to highlight for the IRRC one additional lack from the Triennial Review, which is a water quality standard for bromides that is protective of the potable water use. DEP staff initially presented to the Water Resources Advisory Committee that a bromide standard would be part of the Triennial Review; however, they later reported that while DEP would continue research into setting a bromide standard, it would not be part of the draft Triennial Review.

As DEP recognized as early as 2008, drinking water plants that used source waters contaminated with bromides from oil and gas wastewater were starting to have problems meeting the disinfectant byproduct rule, particularly the limit for total trihalomethanes (TTHM), a carcinogen. This problem is likely to increase with the recent tightening of the TTHM standard by EPA. It is critical that a water quality standard for bromides be established that would restrict discharges of bromides into source waters to ensure that drinking water systems can meet the TTHM limit. Drinking water systems should not have the sole burden to expend resources to meet this regulation when a significant part of the problem comes from polluted sources waters.

On January 11, 2012, the Water Resources Advisory Committee (WRAC) passed a resolution urging DEP to develop a bromide water quality standard. This motion passed on a vote of 10 in favor, none opposed, and one abstention.

We urge the IRRC to recommend to DEP that a bromide water quality standard be established that is protective of potable water use as soon as possible.

In conclusion, the undersigned organizations would like to stress to IRRC the critical need for the establishment of the water quality standards discussed above which are currently lacking in DEP's final-form Triennial Review. DEP staff have conducted a great deal of important and thorough work that is unfortunately being put aside in the final rule, without any scientific or even empirical data to support the delays. Pennsylvania's rivers and our residents deserve to

have the benefits of these protections implemented in 2013, not at some unspecified date in the future.

Sincerely,

Myron Arnowitt, PA State Director
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Karen Feridun, Founder
Berks Gas Truth

John Hoekstra, Executive Director
Raymond Proffitt Foundation

Vera Scroggins, Director
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