

October 20, 2004

Mr. John C. Knittle
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph - Suite 11-500
Chicago, Illinois 60601

RECEIVED
CLERK'S OFFICE

OCT 20 2004

STATE OF ILLINOIS
Pollution Control Board

RE: R2004-021 Radium WQS Proposal

Dear Mr. Knittle,

PCH10

Please accept the attached letter as a written public comment for the proposed changes to the Radium Water Quality Standard on behalf of the Illinois Association of Wastewater Agencies' Water Quality is Subcommittee. An original and copies will be available for distribution at tomorrow's hearing.

Please contact me if you have any questions. I thank you for your time in consideration of these comments.

Sincerely,

Rick Manner, P.E.
IAWA Water Quality Subcommittee - Chairman

ILLINOIS ASSOCIATION OF WASTEWATER AGENCIES WATER QUALITY
SUBCOMMITTEE COMMENTS TO PROPOSED ADDITIONS AND REVISIONS TO
RADIUM WATER QUALITY STANDARDS

General support:

To be effective public servants, Publicly Owned Treatment Works (POTW) employees have two primary purposes. We must both protect the environment and also be good stewards of their ratepayers' money. Some people see a conflict between these two goals, however by using good science we are able to decide when and where additional resources are actually necessary. We use this good science to convince our governing bodies and ultimately the public of the necessity of some changes.

For this reason, our primary interest in the Illinois Pollution Control Board (IPCB) rule-making process is to be assured that limits are based upon the best scientific studies available. In this case the Illinois Environmental Protection Agency (IEPA) has demonstrated that the current limit of 1 pCi/L was based upon an outdated, best guess. IEPA has also demonstrated that since that time, the primary concern that is demonstrated with radium is human exposure via ingestion. Next, they have demonstrated that the national limit for ingestion is 5 pCi/L. With that limit in mind, IEPA has proposed updating the water quality standard with a well-reasoned proposal that appropriately addresses the demonstrated concern. The Illinois Association of Wastewater Agencies (IAWA) Water Quality Subcommittee supports the proposed change.

Burden primarily placed upon small drinking water utilities:

The testimony by IEPA shows that the current water quality standard has little affect on dischargers to larger water-bodies. Smaller publicly owned wastewater treatment utilities are more common dischargers to low-flow streams, where the current 1 pCi/L limit is most problematic. If there is an issue in terms of discharging in conformance with a water quality based effluent limit, the POTW will naturally turn to the source of the radium, which is likely to be an equally small drinking water supplier. This supplier will often be the same municipality that operates the POTW plant. That supplier is now faced with potentially meeting a discharge limit that is 5 times as strict as the national drinking water standard at the same time they are faced with installing treatment to comply with the drinking water standard.

Without the revision of the current 1pCi/L standard, they must either abandon the wells in the radium-bearing strata or buy a WRT-styled system.

If they choose the latter, they will need to run their system with a much lower target concentration and the frequency of changing of media will increase substantially relative to a target of 5 pCi/L, discussed with the Board. With revision of the current 1 pCi/L standard, they will be free to

chose whatever system is best suited to their needs and will not be mandated to buy a specific system.

Non-water quality issues should be addressed elsewhere:

IPCB's rule-making process for water quality standards should be based upon the best science about water quality issues. Similarly, limits regarding worker safety should be based upon the best information about worker safety. However, the venue to impose safety regulations is not a water quality standard. In the discussion about the radium water quality standard, the IEPA has provided a demonstration that it has done a review of water quality issues. Consequently, it has proposed a rule change that is as protective for water quality issues as any in the rest of the country.

Nonetheless, if there is a desire to address worker safety at POTW's in this procedure, it should be noted that the primary concern is exposure to radium after ingestion or, to a lesser extent, exposure to radon after inhalation. Common sense and current safety practices adequately address these issues. Ingestion of sewage and biosolids is not a serious problem and ventilation is already required wherever process wastes are contained in a building.

Other exposure routes are mediated by the nature of sewage treatment and the ease of interception of alpha emissions. Many times the flow is within a pipe or tank or there is an odor control curtain between workers and sewage or workers and biosolids. Also, the clothing that is worn by workers will act as a barrier. All of these are effective at resolving alpha emitters.

Scientific basis is necessary:

There must be a scientific basis to the regulations proposed. Lacking this, the public will not have confidence that their money is being spent wisely to protect the environment. Failure to do so will result in a lack of support when there is a demonstrated need for lower limits in other areas.

The idea that any lower limit for a pollutant is inherently superior to a higher limit, regardless of economics or other factors, leads one to the unattainable conclusion that all pollutants must be limited to zero. While that could be a laudable goal, this is an irrational way to set binding numerical regulations. This thought process does not support 1 pCi/L, or any value above another, since all numbers have an infinite number of values that are smaller than themselves.

Illegal discharges not affected by standards:

The anecdotes of problems with radioisotopes at POTW's in Ohio and Pennsylvania involve illegal discharges that would not be thwarted by a lower radium standard. These illegal activities were not averted by the other

regulations that were broken by the dischargers. It is noteworthy that all of the illegal discharges that were discussed were investigated and prosecuted by POTW's in defense of their own interests and none of the discharges were based upon toxicity of radium to any aquatic species. Illinois' POTW's can be expected to protect their interests equally well and these non-aquatic issues have no bearing upon what is a good water quality standard for radium.

Residual sources regardless of treatment chosen:

There is a misconception in the testimony presented that if radium is removed from the drinking water plant's backwash flow, with a WRT system for example, there will be none arriving at the POTW, so that the POTW can safely assume the issue is permanently resolved. The reality is that there is some residual radium in the drinking water sent to the homeowners and that fraction can be quite high. For example, if a drinking water utility uses an aquifer with 8 pCi/L of radium, and they choose to target 4.5 pCi/L for their product water, more than half of the radium will be sent to homeowners and ultimately the POTW. For these reasons POTW's cannot feel relieved if a WRT system is installed. While 4.5 pCi/L is less than 8 pCi/L, the difference is not sufficient to allow POTW's to ignore the issue.

In addition, even if the radium were removed from the equation, there is still naturally occurring radiation and minor uses from the medical profession or others. Also, the experiences in Ohio and Pennsylvania demonstrate that all POTW's must be vigilant in protecting their workers and the environment from unanticipated discharges. A demonstration of that commitment is that the national sampling initiatives cited in the testimony were the result of POTW-driven efforts. We must continue to review all potential threats to make the workplace as safe as possible.