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TITLE 327 WATER POLLUTION CONTROL BOARD

FIRST NOTICE OF COMMENT PERIOD

#03-130(WPCB)

DEVELOPMENT OF A NEW RULE CONCERNING A STREAMLINED PROCESS FOR OBTAINING A VARIANCE FROM THE WATER QUALITY CRITERIA FOR MERCURY

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on the development of a new rule to address the need for a variance from the existing water quality standards for mercury in wastewater discharges permitted under the National Pollutant Discharge Elimination System (NPDES) program. If a variance process for mercury were to be established through rulemaking, it would not be available for new or recommencing dischargers within the Great Lakes Basin. It would, however, be available for use by existing dischargers within the Basin. The mercury variance would also be available to new and existing dischargers outside the area of GLI authority. Note that the term "GLI" refers to the Great Lakes Initiative rules that apply to dischargers within the Great Lakes Basin. IDEM seeks comment on the affected citations listed and any other provisions of Title 327 that may be affected by this rulemaking.

CITATIONS AFFECTED: 327 IAC 5-3.5.

AUTHORITY: IC 13-13-5-1; 13-13-5-2; IC 13-14-8; 13-14-9; IC 13-15-1-2; IC 13-15-2-1; IC 13-18-3-1; IC 13-18-3-2; IC 13-18-3-3; IC 13-18-4-3.

SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

Basic Purpose and Background

Mercury is a toxic metal that has high bioconcentration and bioaccumulation rates when in the form of methylmercury. Water quality criteria treat all mercury as if it is in the form of methylmercury, the most common organic mercury compound in the environment. The water quality-based effluent limitations for mercury are based on total mercury within the GLI and acid soluble mercury outside the GLI.

Method 1631, Revision E is a new mercury analytical method approved by U.S. EPA in October 2002 that can measure the concentration of mercury at a level below Indiana's existing aquatic life, human health, and wildlife water quality criteria. Prior to the availability of this method, laboratory analysis could only measure mercury at a level well above these water quality criteria. With the use of Method 1631, compliance assessment indicates that the majority of wastewater discharging facilities in Indiana will not be able to consistently meet their NPDES permit limits for mercury.

In order for wastewater discharging facilities not in compliance with the mercury standard to be considered in compliance with their NPDES permits, they would need to apply under the current rules for an individual variance from the standard. Development of a rule that would allow for a streamlined process for obtaining a variance from the existing mercury water quality-based effluent limit is being considered because compliance problems result from the lack of economically viable, end-of-pipe, treatment options and the widespread existence of mercury in the environment. This rulemaking would establish the conditions under which a variance could be granted and requirements for mercury minimization in wastewater discharges.

Alternatives to be Considered within the Rulemaking

Consideration of a rulemaking for a variance from water quality-based effluent limits for mercury is part of the overall triennial review of water quality standards required under 40 CFR 131.20. Under these federal regulations, states with approved NPDES programs are required to review their water quality standards at least once every three (3) years. Through the triennial review process, IDEM decided to separate out a mercury rulemaking to address the specific issues of mercury compliance and the inability of many dischargers in Indiana to comply with the water quality-based effluent limit for mercury. Therefore, a workgroup began meeting in September 2002 to develop an appropriate mercury approach.

IDEM is seeking any other suggested alternatives in addition to the following that have thus far been identified by the workgroup:

- (1) Establish a rule that streamlines the process to obtain a variance to the NPDES permit limit for mercury that a discharger could

receive if it meets certain conditions of having assessed the sources of mercury in its discharge, has eliminated or minimized those sources to the maximum extent possible through a pollutant minimization program, and has provided proof that there is no other economically manageable treatment option.

(2) Maintain the existing process whereby a discharger applies for an individual variance from the mercury standard if unable to meet the mercury standard.

(3) Do no rulemaking concerning mercury but allow individual dischargers that cannot meet the NPDES permit limit to enter into the compliance process with a schedule established in an agreed order with IDEM until such time as mercury compliance is achieved.

(4) Place in the NPDES permits, for at least one permit cycle, a requirement to monitor mercury rather than a mercury discharge limit.

(5) Directly regulate direct and indirect dischargers of mercury.

(6) A combination of these alternatives.

The workgroup, to date, has been reviewing data as to how other states have been dealing with the mercury problem, especially other Region 5 states. The workgroup has not yet concluded what would be the most effective means to deal with the problem in Indiana.

Applicable Federal Law

Federal law mandates standards for water quality under 40 CFR 131. The state adopted these standards at 327 IAC 2-1 and 327 IAC 2-1.5. Specifically, the standards for mercury in water are at 327 IAC 2-1-6 (non-GLI) and 327 IAC 2-1.5-8 (GLI). Unfortunately, these standards cannot be met by most existing sources in Indiana. Legally, if the dischargers cannot meet the standards, they may apply to IDEM for a variance from the rules under 327 IAC 2-1-8.8 (non-GLI) and 327 IAC 2-1.5-17 (GLI). The commissioner makes a determination on the variance application in accordance with 327 IAC 5-3-4.1. No federal law directs states to deal in any specified manner with mercury in wastewater discharges.

In exploring possibilities to bring dischargers into compliance with Indiana's laws, it is important to understand the legal authority with which rules can be made and what language the rules contain. All authority for water quality standards comes first from the federal Water Pollution Control Act (33 U.S.C. 1251-1387). These standards are then codified in the Code of Federal Regulations (CFR). Indiana must adopt its own water quality standards, but they can be no less stringent than standards found in federal law.

In addition, the state has the authority to issue variances under IC 13-14-8-9. The water pollution control board has further interpreted the statute for new and existing non-GLI sources under 327 IAC 2-1-8.8 and for issuing variances to existing GLI sources under 327 IAC 2-1.5-17.

The state's rules must be at least as stringent as the federal rules, as stated in 40 CFR 131.4; therefore, any new variance language must be as stringent as standards set forth in 327 IAC 2-1 and 327 IAC 2-1.5.

Potential Fiscal Impact

The most often stated cost associated with mercury treatment is that "end-of-pipe treatment" could be as much as ten million dollars (\$10,000,000) per pound of mercury removed. This cost is an estimate based on data used by the state of Ohio during its variance rulemaking for mercury. IDEM received the following cost estimates from respondents to an earlier first notice of rulemaking concerning mercury:

(1) At a flow of ten million (10,000,000) gallons per day and assuming a seventy-five percent (75%) removal efficiency of total mercury using ion exchange, the annualized cost would be one hundred thirty-six million dollars (\$36,000,000) per pound of mercury removed.

(2) The overall annualized cost of mercury removal utilizing the control methodology identified as feasible (though not capable of attaining the water quality-based effluent limit (WQBEL)) would cost one hundred sixty-five million dollars (\$165,000,000) per year per thirty (30) pounds of mercury removed.

Without a streamlined variance alternative, permit holders will have to submit individual variance application. This process can be resource and time intensive for the mercury discharging facility, the interested public, and IDEM. Processing numerous individual mercury variances would detract from other important work required of permit holders, the public, and IDEM. A streamlined variance process by rule could reduce the cost, time, and resources that every affected facility would need to expend on the analysis of the options to reduce mercury levels and their associated costs.

Other options to a variance include relying on the compliance process to establish an agreed order with a compliance schedule for each mercury discharger not in compliance with permit limits; however, this process can be time consuming for both IDEM staff and the discharger.

IDEM is interested in receiving comments containing additional specific cost and effectiveness analyses regarding the following:

(1) Mercury treatment and removal.

(2) Pollution prevention methods to keep mercury out of the wastewater.

(3) Targeted remediation efforts to remove mercury that is in the sewer system.

(4) The costs to prepare an individual variance application for mercury and the cost savings that might be realized with a streamlined application process.

Public Participation and Workgroup Information

An external workgroup has been established and began meeting in September 2002 to discuss issues involved in this rulemaking. The workgroup has held several meetings that primarily focused on framing the issue to be solved by the rulemaking and reviewing data from other states on the issue of mercury. The workgroup is made up of a cross section of stakeholders, interested parties, and IDEM staff. Information on past workgroup meetings and scheduling and agendas of future meetings is available on the IDEM Web site at <http://www.IN.gov/idem/water/planbr/wqs/review/mercury.html>.

If you wish to provide comments to the workgroup on the rulemaking, attend meetings, obtain any additional information on the workgroup, or submit suggestions related to the workgroup process, please contact MaryAnn Stevens, Rules Section, Office of Water Quality at (317) 232-8635 or (800) 451-6027 (in Indiana). Please provide your name, phone number, and e-mail address, if applicable, where you can be contacted. The public is also encouraged to submit comments and questions to members of the workgroup who represent their particular interests in the rulemaking. Any person that submitted comments to an earlier first notice of rulemaking concerning mercury is encouraged to resubmit those comments if they are still relevant to the topic of this first notice.

STATUTORY AND REGULATORY REQUIREMENTS

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as the case may be.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.
- (6) Economic reasonableness of measuring or reducing any particular type of pollution.
- (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

REQUEST FOR PUBLIC COMMENTS

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of a rule concerning a process for a streamlined mercury variance.
- (2) The submission of suggestions for the development of draft rule language.
- (3) Specific cost and effectiveness analyses for mercury treatment, removal, pollution prevention, or variance preparation.
- (4) Resubmission of relevant comments made to earlier first notices concerning mercury variance (01-135(WPCB) published at 24 IR 2593 or 02-138(WPCB) published at 25 IR 2863).

Mailed comments should be addressed to:

#03-130(WPCB) [Mercury]
MaryAnn Stevens, Senior Rulewriter
Rules Section
Office of Water Quality
Indiana Department of Environmental Management
P.O. Box 6015
Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the IDEM receptionist on duty at the twelfth floor reception desk, Office of Water Quality, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana. Comments also may be submitted by facsimile to (317) 232-8406, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Office of Water Quality, Rules Section at (317) 233-8903. Please note that we are not able to take electronic (e-mail) submission of formal comments at this time.

COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by July 30, 2003.

Additional information regarding this rulemaking action may be obtained from MaryAnn Stevens, Rules Section, Office of Water Quality, (317) 232-8635 or (800) 451-6027 (in Indiana) or technical information concerning mercury may be obtained from Steve Roush, Industrial Permit Section, Office of Water Quality, (317) 232-8706 or (800) 451-6027 (in Indiana).

Tim Method
Deputy Commissioner
Indiana Department of Environmental Management