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TITLE 327 WATER POLLUTION CONTROL BOARD

SECOND NOTICE OF COMMENT PERIOD

#03-130(WPCB)

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

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM), in consultation with a workgroup of interested persons, has developed draft rule language for a new rule to establish a process and application requirements for obtaining a variance from the existing water quality criterion used to establish a water quality-based effluent limitation for mercury in wastewater discharges permitted under the National Pollutant Discharge Elimination System (NPDES) program. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 327 that may be affected by this rulemaking.

HISTORY

First Notice of Comment Period: #03-130(WPCB) June 1, 2003, Indiana Register (26 IR 3171).

CITATIONS AFFECTED: 327 IAC 5-3.5.

AUTHORITY: IC 13-13-5-1; 13-13-5-2; IC 13-14-8; IC 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. Note that the term “GLI” refers to the Great Lakes Initiative rules that apply to dischargers within the Great Lakes Basin.

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 many wastewater discharging facilities in Indiana will not be able to consistently meet applicable NPDES permit limits for mercury.

Existing rules allow a wastewater discharging facility to apply for an individual variance from the applicable NPDES permit limit for mercury. A rule that allows for a streamlined process for obtaining a variance from the existing mercury water quality-based effluent limit has been developed to simplify the process for the applicant, the department, and the public because enough is currently known to show that there is a lack of economically viable, end-of-pipe, treatment options and widespread existence of mercury in the environment. This rulemaking establishes the conditions under which a streamlined variance may be granted and renewed and requirements for a mercury minimization plan to assure that all efforts are being made to minimize mercury discharges.

IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed Under Federal Law

This statute requires IDEM to identify, as part of the second notice published in the Indiana Register, the estimated fiscal impact and expected benefits of any elements of the draft rule that are not imposed under federal law. IDEM seeks comments on these elements as well as specific fiscal impact information. The following elements of the draft rule are “not imposed under federal law” (NIFL elements) and have been identified as either having an estimated fiscal impact or providing an expected benefit to entities regulated under the draft rule:

The concept of a streamlined mercury variance is not explicitly identified in federal law. While the applicants for the

SMV will incur cost, it will be less than what would be incurred in applying for an individual mercury variance. The SMV simplifies and lessens the information that the applicant for a variance will have to provide relative to an individual variance primarily because the applicant does not have to prove social and economic hardship as a condition of the SMV. The development and implementation of a pollutant minimization program plan (PMPP), required as part of a SMV, will require expenditure and effort on the part of an applicant for a SMV. Such a plan would also be required as part of an individual variance so no additional cost or burden is imposed by this rule relative to a PMPP.

Regulated entities in Indiana with mercury discharge limits in their NPDES permits have been requesting a streamlined alternative to the existing statutory variance process. Similar streamlined variance options have been made available in other states. This request is based on the lack of economically viable, end-of-pipe treatment options.

IDEM and the mercury workgroup established for this rule have consulted many mercury studies, journal papers, and other states' programs in developing the SMV. These materials are available on the IDEM Triennial Rulemaking web page or are available during normal business hours at the Indiana Department of Environmental Management, Office of Water Quality, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206.

Potential Fiscal Impact

IDEM believes the streamlined mercury variance rule will provide the regulated facilities a net cost reduction when compared to the expense of fulfilling the requirements of applying for an individual variance from a mercury discharge limit in a NPDES permit. Further, given the inability of technological treatment options to meet the water quality criterion for mercury, the SMV will provide a mechanism to alleviate facility noncompliance and IDEM enforcement action which will be a cost saving to both groups.

IDEM does not believe that this rule will have a significant fiscal impact. IDEM requests public comment on the economic impact and benefit from this rule.

Public Participation and Workgroup Information

An external workgroup has been established to discuss issues involved in this rulemaking. The workgroup is made up of IDEM staff and a cross-section of stakeholders including regulated facilities and members of environmental groups and began meeting in October 2002 to discuss whether a streamlined approach to applying for a variance would serve the need concerning mercury in wastewater discharges. Upon deciding that a streamlined mercury variance is necessary, the workgroup held monthly meetings to come to near consensus on the application and issuance requirements for a streamlined mercury variance, its duration, and availability for renewal.

Based on workgroup discussions, IDEM is specifically looking for comments on the content required in a pollutant minimization program plan (PMPP) and the approach selected for establishing the interim limit for mercury discharge throughout the duration of a SMV. The draft rule would not be available to dischargers with proposed mercury limits greater than thirty (30) ng/l in order to be consistent with expected federal requirements for endangered species.

Information concerning the mercury workgroup activities may be found on the IDEM Triennial Rulemaking web page at:

<http://www.in.gov/idem/rules/progress/water/wpcb03130/index.html>

If you wish to provide comments to the workgroup on the rulemaking, attend meetings, or have 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.

SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD

IDEM requested public comment from June 1, 2003, through July 30, 2003, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received comment letters from the following parties by the comment period deadline:

Brownsburg, Town of, Kathy Dillon, Wastewater Treatment Plant Superintendent (BRO)

Elkhart, City of, Art Umble, Manager of Water and Wastewater Operations (ELK)

Gary, City of, James B. Meyer, Attorney (GARY)

Improving Kids Environment, Tom Neltner (IKE)

Indiana Association of Cities and Towns, James Trobaugh, President (IACT)

Indiana Water Quality Coalition and the Indiana Manufacturers Association, represented by Barnes and Thornburg (IWQC-IMA)

Indiana Water Quality Coalition, represented by Barnes and Thornburg, first notice comment letter submitted in July

2002 and resubmitted in July 2003 (IWQC-2002)

Indianapolis, City of, Barbara A. Lawrence, Director of Department of Public Works (INDP)

Michigan City, Sanitary District, Dan R. Olson, Wastewater Treatment Plant Superintendent (SDMC)

Northern Indiana Public Service Company (NIPSCO)

Save the Dunes Council, Charlotte Read (SDC)

United States Steel Company (USS)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: IDEM should expedite the rulemaking process to establish a streamlined procedure and National Pollutant Discharge Elimination System (NPDES) permit conditions specific to mercury variances. There is a need for a mercury variance process due to the ubiquitous nature of mercury in the environment, the uncertain effectiveness, prohibitive costs, and adverse multimedia impacts associated with available mercury control technologies, and the costs to both dischargers and the state in preparing and evaluating individual mercury variance applications. (ELK, GARY, IACT, IKE, INDP, IWQC-2002, IWQC-IMA, NIPSCO, USS)

Response: IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process to address the concerns expressed in this comment.

Comment: Cost to a municipality for preparation of an individual variance application is approximately one hundred thousand dollars (\$100,000). (INDP)

Response: IDEM does not dispute the estimated cost of preparing an individual variance application. IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide opportunity under certain circumstances to forego the need to prepare an individual variance application.

Comment: An individual variance application, as informally determined according to conversations with consulting firms, would likely cost between fifty and seventy-five thousand dollars. A municipality having mercury limits in the extended permit and compliance measured by the limit of detection for Method 425.1 would need two variances, one from WQBELs to provide time to convert analysis to Method 1631/1669 and collect ample data to measure variability and the second variance from final effluent limits based upon the data collected using the new methodology. Therefore, the individual mercury variances would cost approximately one hundred to one hundred fifty thousand dollars for the initial permit renewal and between fifty and seventy-five thousand dollars for subsequent permit renewals. (SDMC)

Response: IDEM does not dispute the estimated cost of preparing an individual variance application. IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide opportunity under certain circumstances to forego the need to prepare an individual variance application. Water analysis using Method 425.1 will not be utilized in determining compliance or the need to obtain mercury effluent limits.

Comment: The annual cost to treat for mercury, as suggested in the workgroup consideration, is several times the total budget per year for a class III municipal treatment plant. (BRO)

Response: IDEM does not dispute the estimated cost of treating wastewater to remove mercury. IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide an alternative to unreasonable costs associated with treating wastewater to further remove mercury.

Comment: The Association of Metropolitan Sewerage Agencies (AMSA) reports findings that indicate unit operations directly associated with mercury removal (for example, reverse osmosis and ion exchange) result in an annualized treatment cost for mercury of one million nine hundred twenty-two thousand dollars (\$1,922,000) per million gallons per day. (INDP)

Response: IDEM does not dispute the estimated cost of treating wastewater to remove mercury. IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide an alternative to unreasonable costs associated with treating wastewater to further remove mercury.

Comment: Industries within the Great Lakes system are beginning to analyze costs associated with using treatment technologies to attempt to meet the 1.3 ng/l wildlife criteria. An economic analysis performed by the state of Ohio determined that the average cost to reduce mercury below 12 ng/l from a wastestream through end-of-pipe treatment would exceed ten million dollars per pound of mercury removed. This cost finding was a major reason Ohio developed a statewide mercury variance as part of its Great Lakes water quality regulations. (IWQC-2002)

Response: IDEM does not dispute the estimated cost of treating wastewater to remove mercury. IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide an alternative to unreasonable costs associated with treating wastewater to further remove mercury.

Comment: End-of-pipe treatment estimates ignore the potential gains of activities that prevent mercury from entering the sewer system and remediate the reservoirs of mercury that are already in the sewer system. Prevention first type approaches to mercury treatment will yield the biggest reduction that, when combined with the array of other mercury

reduction efforts at work at the national, state, and local level, may demonstrate compliance in the next ten years. Since these efforts are just now reaching maturity in a few locations, they may still show that they can achieve compliance with the permit limits without a variance when the full panoply of efforts goes into effect. (IKE)

Response: The streamlined mercury variance will require facilities to initiate mercury pollution prevention measures that are designed to reduce the amount of mercury entering the wastewater treatment system of municipal and industrial facilities. IDEM is optimistic about the eventual possibility of achieving compliance with the water quality-based effluent limits through the implementation of pollution prevention measures.

Comment: Over four years have passed since draft rule language for a mercury variance was proposed in the 1999 Triennial Review rulemaking. IDEM currently is issuing final and draft permits with mercury limits that will take effect following a three or five year schedule of compliance. Without a streamlined mercury variance process, these dischargers will need to apply for individual mercury variances or be faced with mercury limits they will not be able to meet. A streamlined mercury variance process needs to be available to dischargers prior to the time that compliance schedules end. A streamlined mercury variance rule must be adopted by the Indiana Water Pollution Control Board and must also be reviewed and approved by EPA before it can be used by dischargers. Finally, dischargers will need time to request the variance, and their permits will need to be modified. All of this must happen before the compliance schedule ends. Therefore, IDEM needs to complete rulemaking for the streamlined mercury variance even sooner than the agency's projected completion date of December 2004. (IWQC-2002, IWQC-IMA, NIPSCO)

Response: IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide opportunity under certain circumstances to forego the need to prepare an individual variance application. IDEM intends to complete the rulemaking process in time for the affected facilities to obtain a streamlined mercury variance before the end of their compliance schedules.

Comment: The streamlined mercury variance process is necessary because it is wasteful and inefficient for dischargers to prepare, and agencies to review, numerous redundant individual variance requests. The most important aspect of the streamlined mercury variance process is the up-front establishment of the socio-economic need for the variance so that each applicant will not have to make an independent socio-economic demonstration. (IWQC-2002, IWQC-IMA, USS)

Response: IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide opportunity under certain circumstances to forego the need to prepare an individual variance application. The streamlined mercury variance rule will establish the socio-economic need for the variance.

Comment: The statewide mercury variance rule should not contain any reference to a discharger having to prove that there is no economically manageable treatment option as is stated in the published first notice of rulemaking. Proving no existing manageable treatment option could be as difficult as meeting the economic hardship portion of the existing state variance procedure. The economic treatment demonstration should be handled once as part of the streamlined variance for the state. If each applicant for the statewide mercury variance submitted individually derived proof of no economically manageable treatment, IDEM's workload would greatly increase especially if the Great Lakes Initiative (GLI) criteria of 1.3 ng/l is applied to all waters in Indiana. (NIPSCO)

Response: IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide opportunity under certain circumstances to forego the need to prepare an individual variance application. The streamlined mercury variance rule will establish that there is not currently an economically manageable treatment option available to meet the water quality-based limits for mercury.

Comment: The WPCB, in addition to adopting a streamline mercury variance rule, should modify the mercury standard outside the Great Lakes Basin so it is consistent with the standard in the Great Lakes Basin. This change should include the longer, thirty day, averaging period for calculating the mercury standard as the statewide calculation method. (IKE)

Response: Amendments to criteria and standards will, for the most part, be addressed in a subsequent, second round of rulemaking in the triennial process. This issue will be addressed at that time.

Comment: A variance procedure would not be necessary if Indiana did not include mercury limits in major discharge permits. The federal government did not mandate the placement of mercury limits in NPDES permits. Indiana has created a regulatory problem by committing to EPA to place mercury limits in major permits. State resources could be better spent on a state pollution prevention program for potential dischargers that use mercury in their operation and products. (BRO)

Response: IDEM has included mercury limits in permits that either had mercury limits in previously issued permits or where the discharger had mercury effluent data using analytical method 1631 that indicated the discharge has a reasonable potential to exceed the water quality criteria for mercury. All other reissued major permits are being required to monitor the effluent for mercury using method 1631. Both state and federal rules require IDEM to place limits on

pollutants found in discharges subject to the NPDES Permit Program when the pollutants are found to be present in a concentration that shows the reasonable potential to exceed the water quality criterion for that pollutant.

Comment: Indiana should follow the leads of Illinois, Ohio, and Pennsylvania and adopt the mercury GLI human health criterion of 3.1 ng/l, reflective of the revised reference dose. Revising the mercury human health criteria from 1.8 to 3.1 ng/l would provide facilities needing a variance from the 1.3 ng/l wildlife criteria with assurance that human health is being protected. (USS)

Response: Data has not been presented to IDEM to indicate that all dischargers who will need a variance from the 1.3 ng/l criterion will be able to meet the 3.1 ng/l criterion. This particular rulemaking focuses on providing a SMV option for a variance regardless of the specific mercury criteria.

Comment: A phased pretreatment regulatory approach would better address the mercury issue instead of placing limits on municipal dischargers that only convey pollutants and provide very little treatment for mercury. Pretreatment permits of potential mercury dischargers could contain language regarding the required reduction and control of mercury waste as a first phase of compliance. Water sampling results following phase I could dictate areas needing additional attention, monitoring, or the imposition of a limit. (BRO)

Response: Pretreatment and pollution prevention techniques each have shown some success in removing mercury from the untreated wastewater. The streamlined mercury variance rule will include a requirement to implement a pollution prevention program to minimize the amount of mercury entering wastewater treatment systems. The influent and effluent of several sanitary wastewater treatment plants have been sampled for mercury, and sanitary wastewater treatment plants have shown a removal rate of approximately ninety (90) to ninety-five (95) percent for mercury.

Comment: Incentives should be given to encourage facilities to seek reductions in the use of mercury in instruments and equipment. U.S. Steel supports and currently participates in the Binational Toxics Strategy Stakeholders - Mercury Agreement Reduction Plan, creating mercury inventories, evaluating options to replace or remove mercury containing equipment, and implementing viable replacement options to mercury containing equipment and materials. (USS)

Response: IDEM applauds US Steel for participating in the Mercury Agreement Reduction Plan. US Steel is providing much needed leadership in the field of mercury use reduction efforts for industrial facilities. Please provide IDEM with some examples of the types of incentives thought to be helpful in reducing or eliminating the use of mercury at industrial facilities.

Comment: The 2003 amendments to IC 13-14-8-9 concerning requirements for a variance from a water quality standard must be taken into consideration in any proposal for a streamlined variance from mercury limits in all Indiana waters unless IDEM decides to develop alternative procedures for limiting mercury discharges that do not rely on a variance. (SDC)

Response: The 2003 amendments to IC 13-14-8-9 add a requirement that a variance based in part on a NPDES permit must meet the conditions specified in 40 CFR Part 132, Appendix F, Procedure 2.C and rules adopted by the board. IDEM will take the 2003 amendments to IC 13-14-8-9 into consideration when developing the statewide mercury variance (SMV) because the SMV will be based on a standard in a NPDES permit.

Comment: Will mixing zones for mercury or any other biological contaminate of concern (BCC) be prohibited in the non-Great Lakes basin area of the state after January 1, 2004, as it will be prohibited in the Great Lakes area? (SDC)

Response: Mixing zones are not currently allowed for new dischargers of BCCs in the non-Great Lakes basin, and, beginning on January 1, 2004, mixing zones will not be allowed for any, neither new nor existing, discharge of a BCC. These are similar requirements to that of the Great Lakes areas.

Comment: Little or no consideration has been given by the mercury workgroup to exploring either alternative effluent mercury limits or a compliance schedule for attainment of the applicable mercury standard. As well, little discussion has focused on setting one statewide mercury standard for all dischargers to state waters. It is inappropriate that one area of the state has a standard less stringent than another. (SDC)

Response: The rules for determining the water quality-based effluent limits that are placed in NPDES permits will not allow IDEM to consider radically different effluent limits for mercury. Some permits have been given a compliance schedule to meet newly imposed limits for mercury, but the compliance schedules are limited to either a three or five year period of time for the permitted facility to achieve compliance with the final effluent limits for mercury. IDEM is certain that most, if not all, facilities will not be able to meet the final effluent limits for mercury within the period of time allotted by a compliance schedule. Therefore, the facilities that have been given a compliance schedule to achieve the final effluent limits for mercury will also need a variance from the final effluent limits for mercury before the end of the compliance schedule.

Comment: The state is imposing a mercury limit that in practicality cannot be met. Municipal treatment plants are being expected to remove background concentration of constituents in drinking water that are already present in the

environment. Wastewater facilities should not be forced to remove background levels and create a negative mercury discharge. Municipalities are investing large amounts of money in capital projects for CSO elimination and minimization. There should be a non-review mercury variance procedure established for the municipalities that are working on CSO projects. (BRO)

Response: IDEM is engaged in the rulemaking process to establish a streamlined mercury variance process that will provide opportunity under certain circumstances to forego the need to prepare an individual variance application. The streamlined mercury variance rule will require municipalities and industries to implement a pollution prevention program to minimize the amount of mercury in the untreated wastewater and final effluent. IDEM recognizes the capital needs of the municipalities regarding the projects for CSO elimination and minimization. Each affected facility will be required to demonstrate a good faith effort to reduce or eliminate mercury from its discharge. The level of effort each discharger achieves may be affected by the amount of funding available to implement the reduction effort.

Comment: The average concentration of mercury in rain and snow fall in Indiana is approximately thirteen (13) parts per trillion. All storm water potentially will require advanced treatment in order to achieve compliance with the water quality criteria for mercury. (INDP)

Response: IDEM does not intend to place effluent limitations for mercury on storm water only discharges. Recently promulgated Rule 13 (327 IAC 15-13) requires the development and implementation of storm water quality management plans by municipalities to utilize appropriate structural and nonstructural best management practices to control the pollutants occurring in storm water.

Comment: Background concentrations are sometimes greater than 1.3 ng/l, and these sources are not directly controllable by the facility. (IWQC-2002, USS, NIPSCO)

Response: The streamlined mercury variance rule will require municipalities and industries to implement a pollution prevention program to minimize the amount of mercury in the untreated wastewater and final effluent. Each affected facility will be required to demonstrate a good faith effort to reduce or eliminate mercury from its discharge. IDEM recognizes that some sources of mercury may be beyond a facility's ability to control.

Comment: Water quality regulations at 327 IAC 2-1.5-8 require installation of cooling towers for new wastewater heat discharges above 500 million British Thermal Units to Lake Michigan, and upcoming Clean Water Act (CWA) Section 316(b) regulations for cooling water intake structures will likely cause a significant increase in the use of cooling towers. For facilities that use cooling water towers, mercury should be regulated by mass only and not concentration. (USS, NIPSCO)

Response: Where rules and statute allow for the implementation of effluent limits for mass only, IDEM will consider if it is appropriate to limit mercury in that manner during the permit issuance process.

Comment: There is no guarantee that technology will be available to reduce mercury levels below WQBELs within the next five (5) to ten (10) years or, even if it is available, that it will be affordable. An annualized cost of \$5.5 million per pound of mercury removed (as provided in the first notice) without achieving WQBELs simply is not affordable. Therefore, the use of a compliance schedule as an alternative to a streamlined mercury variance is unworkable. (INDP, IWQC-2002, IWQC-IMA, NIPSCO)

Response: IDEM does not dispute the estimated cost of achieving compliance with the mercury effluent limits or the possibility that treatment technology may not be available in the foreseeable future to achieve the effluent limits for mercury. Compliance schedules are a means to delay the implementation of final effluent limits for three to five years during which time it is possible for treatment technology to be developed or pollution prevention techniques to be implemented that may achieve compliance with the final effluent limits for mercury. If the three to five years are inadequate to achieve compliance with the final effluent limits for mercury, then the facility has the option of applying for a variance.

Comment: No feasible wastewater treatment methods have been found capable of attaining the 1.3 ng/l criterion. Enormous amounts of additional electricity are required to run ion exchange removal technologies which can achieve 5 ng/l. (USS)

Response: IDEM does not dispute the fact that an economically feasible treatment system does not currently exist to consistently achieve the final effluent limits for mercury nor that large amounts of electricity may be necessary to operate some treatment systems.

Comment: The Indianapolis individual mercury variance application contains the following report on significant multi-media environmental impacts caused by adding ion exchange treatment to an advanced wastewater treatment plant to further reduce mercury in the wastewater discharge: (1) additional discharge of nine million one hundred twenty-five thousand (9,125,000) pounds per year of salt to the river; (2) solid waste generation requiring three thousand eight hundred (3,800) cubic yards per year of landfill space; (3) additional use of fifty-two million six hundred thousand

(52,600,000) kilowatts per hour per year of electricity; and (4) as a result of the additional electrical power consumption there are additional emissions of carbon dioxide (fifty seven thousand eight hundred (57,800) tons per year), sulfur oxides (one thousand three hundred sixty-eight (1,368) tons per year), nitrous oxides (one hundred six (106) tons per year), and mercury (ten and eight tenths (10.8) pounds per year). As mercury is an element and can never be degraded or destroyed, its treatment for removal from wastewater discharges will cause increases to land pollutants and air emissions. (INDP)

Response: IDEM does not dispute the city's claims about the amount of additional pollutants, energy use, and solid waste landfill space that could be used to meet the final effluent limits for mercury. This type of information helps to demonstrate the need for a streamlined mercury variance.

Comment: Feasible control methodologies capable of attaining the WQBEL were not found by the City of Indianapolis during its preparation of an individual mercury variance application. A feasible control methodology that could reduce mercury in the city's effluent by fifty percent was identified. The overall annualized cost of pollutant removal utilizing the control methodology identified as feasible is one hundred sixty-four and nine tenths million dollars (\$164.9M) per year. The cost effectiveness of adding ion exchange is five billion four hundred seventy-eight thousand four hundred dollars (\$5,478,400) per pound of mercury removed. (INDP)

Response: IDEM does not dispute the city's estimate of the cost to implement wastewater treatment for the removal of mercury. This type of information helps to demonstrate the need for a streamlined mercury variance.

Comment: The option of requiring monitoring for at least one (1) permit cycle is sensible in many circumstances, but it is not an alternative to providing a streamlined mercury variance process. Rather, this option will only provide better data to establish the need for a variance. (IWQC-IMA)

Response: IDEM is considering many alternatives while working toward the development of a rule for a streamlined mercury variance.

Comment: The mercury variance rule must require POTWs to better regulate direct dischargers of mercury to their treatment plants. This would assume that the authority of POTWs to regulate their indirect dischargers results in a reduction of mercury in the POTW's discharge to the receiving stream. Does the lack of delegated authority from EPA limit Indiana's effectiveness to enforce existing pretreatment requirements? (SDC)

Response: IDEM does not believe that the lack of a delegated pretreatment program limits Indiana's effectiveness to enforce existing pretreatment program requirements.

Comment: The mercury variance rule must provide POTWs with tools to reduce direct discharges of mercury to the POTW such as dentists and hospitals being required to remove mercury from traps. POTWs need to undertake changes to their sewer user ordinances and embark on public education as a part of a required pollution minimization plan about reducing discharges of mercury from households and commercial establishments and proper disposal of mercury containing products. (IKE, SDC)

Response: There will be no requirements imposed on dental offices through this rulemaking. Individual municipalities are required to evaluate dental facilities in development of their PMPP and they may regulate dental offices as a measure within their PMPP to lower a municipality's mercury according to its authority.

Comment: All dentists offices and healthcare facilities should be subject to consistent standards whether discharging to ground water through a septic system, to a municipal wastewater treatment system, or whether the facility has or has not requested a mercury variance. Uniform standards will ensure fairness and consistency among facilities and avoid implementation delays. Municipalities that obtain a streamlined variance should be responsible for enforcing the provisions. The standards should be based on reasonably available control technology. Municipalities that have on-going mercury problems should be allowed to pursue more aggressive controls through their pretreatment programs. (IKE)

Response: There will be no requirements imposed on dental offices through this rulemaking. Individual municipalities are required to evaluate dental facilities in development of their PMPP and they may regulate dental offices as a measure within their PMPP to lower a municipality's mercury according to its authority.

Comment: Significant reduction in the total mercury influent concentration to a municipal advanced wastewater treatment plant can only be achieved by initiating a source control program involving non-regulated sources, such as dentists, hospitals, laboratories, and domestic sources. Municipal-wide pollution prevention programs can reduce influent levels of total mercury given a minimum of five to twenty years to achieve success. These programs require major public outreach and education, complete stakeholder involvement and commitment, and guaranteed sources of funding. (INDP)

Response: The required PMPP must address these potential sources of mercury and the applicant must go through a public process in the development of the PMPP.

Comment: It is unclear what is meant by the alternative of directly regulating direct and indirect dischargers of

mercury. IDEM and municipalities with delegated pretreatment programs already regulate dischargers and are able to impose limitations as necessary. (IWQC-IMA)

Response: The term “indirect dischargers” refers to facilities that do not have a NPDES permit for wastewater discharge and instead discharge to another wastewater treatment facility. The often-used example is the dental office. IDEM does not have unequivocal authority to regulate indirect discharges; therefore, there will be no requirements imposed on dental offices through this rulemaking. Individual municipalities may regulate dental offices to lower a municipality’s mercury according to its authority.

Comment: If mercury is environmentally dangerous then there should be a total ban on the use and sale of products containing mercury. Is the possibility of such a ban what the first notice is referencing with the discussion of directly regulating the indirect dischargers of mercury? Instead of imposing mercury limits for wastewater dischargers, the state could target mercury users/dischargers and regulate them through an inspection and permitting program. (BRO)

Response: IDEM is not proposing a rule that would place a total ban on the use and sale of products containing mercury since that is outside of the authority given to IDEM by the state legislature. IDEM does not intend to place requirements in the rule for a streamlined mercury variance that will directly target mercury users through an inspection and permitting program other than the existing NPDES program that includes permitting and inspecting.

Comment: The mercury variance rule needs to have a state goal of achieving the existing water quality standard for mercury in Indiana waters by a date certain. It is now possible to verify whether mercury limits are being met by using the EPA approved method 1631 that can detect mercury levels in the part per trillion range. The rule should provide IDEM with flexibility to assess the best way for a discharger to achieve the mercury standard in the shortest time possible if not currently capable of meeting the standard. These options should include: (1) assessing the effectiveness of imposing alternative effluent limits for a limited duration to be followed by more stringent final effluent limits or issuing a compliance schedule with timetables for meeting the standard that extends beyond the expiration date of a particular permit; and (2) issuance of an individual variance based upon Indiana’s existing rules. (SDC)

Response: In light of existing evidence that shows most dischargers are not capable of achieving compliance with final limits for mercury using any of the known treatment systems, IDEM is not comfortable establishing a firm deadline for requiring all dischargers to achieve compliance with the final limits for mercury.

Comment: New, low level, mercury analysis (EPA Method 1631) has demonstrated that the advanced wastewater treatment technologies currently utilized in Indiana are capable of achieving up to ninety-five to ninety-eight percent reduction of mercury in effluent. Despite this removal efficiency, these treated effluents are still incapable of consistently achieving the water quality criteria for mercury. Reverse osmosis and ion exchange appear to be the only remaining feasible treatment options. (INDP)

Response: These stated treatment results are consistent with IDEM’s findings.

Comment: IDEM has been issuing NPDES permits for facilities that contain a three-year monitoring requirement with a fifty-nine (59) month overall compliance schedule. This approach delays the need for a variance for almost five years and facilities still feel obligated to apply for a variance whenever a limit becomes effective even if covered by a compliance schedule. The requirement to monitor for mercury should not be extended any longer than is necessary to demonstrate that mercury discharges exceed the standard. The proper mechanism for dealing with the issue is a variance rather than distorting the permit conditions. (IKE)

Response: Some permitted facilities have demonstrated a reasonable potential to exceed the final effluent limits for mercury. Since a streamlined mercury variance process has not been established in Indiana that would allow these facilities to receive a variance in a timely manner, IDEM has included a compliance schedule in the renewed permits that would allow the affected facilities to operate without being in violation of their permits. The purpose of this rulemaking is to develop a streamlined mercury variance process and rules so that affected facilities will have the ability to obtain a variance in as timely a manner as practical.

Comment: Indiana’s power plants and industries should be encouraged to request individual variances or compliance schedules if and only if current mercury data using the approved test method confirm that they are not meeting the new mercury limits. Otherwise, they should be required to meet the new limits. (SDC)

Response: IDEM agrees with the concept that a discharger capable of meeting the final effluent limits for mercury does not need a variance and should not receive a variance. The draft rule establishes an interim mercury limit based on a review of the most recent mercury discharge information.

Comment: Indiana should consider patterning its streamlined mercury variance after Ohio’s general mercury variance, codified at R. 3745-33-07(D)(10), which was developed because Ohio has determined that widespread social and economic impacts from end-of-pipe treatment necessary to comply with mercury limits below twelve (12) ng/L has been sufficiently demonstrated through a number of studies. Therefore, Ohio has streamlined the variance process to eliminate

the requirement that the applicant make its own socio-economic demonstration. The general mercury variance is available to existing (as of June 22, 1999) dischargers who need relief from a monthly average mercury limit and will be able to comply with a 12 ng/L annual average by the time its permit expires. Permittees who need a variance from a maximum mercury limit or who cannot meet the annual average must apply for an individual variance. (IWQC-IMA, NIPSCO)

Response: IDEM and the workgroup have reviewed the approaches taken by Ohio and other states. Some concepts from other states' provisions have been included in the draft rule.

Comment: The often cited Ohio study of the high cost of end-of-pipe mercury removal is at least five years old. When contacted for more recent information and attempts to update the Ohio study, EPA says no more up to date information on end-of-pipe technology has been sought. Imposition of end-of-pipe controls should be retained as an alternative because they may stimulate better and cheaper controls if and when it is determined that pollution prevention and source reduction alone will not achieve the standard. (SDC)

Response: IDEM retains the ability to require the use of end-of-pipe treatment or controls to meet the effluent limits for mercury. However, until it has been demonstrated that an end-of-pipe treatment or control system can achieve the effluent limits for mercury in an economically achievable manner, a variance from the effluent limits for mercury is the only viable alternative available under the applicable statutes and rules.

Comment: In Ohio, permittees applying for the general mercury variance must have data collected using Method 1631 to support their applications and must also include a description of mercury reduction and elimination measures taken to date, as well as a Plan of Study (POS) to further identify and evaluate known and potential mercury sources. In addition, applicants must explain why there are no readily available means to meet their mercury limits without end-of-pipe controls. If the variance application is granted, the permit will include an initial monthly average limit based on historical performance and will require the development and implementation of a Pollutant Minimization Program (PMP). Implementation may take more than one permit term as long as the permittee is making reasonable progress. After the POS and PMP have been completed, the permittee must submit a certification of completion to be approved by the state. If the annual average mercury effluent concentration of 12 ng/L is exceeded after approval of that certification, the permittee will be required to submit an individual variance application or meet the WQBEL for mercury. If the POS and PMP have been completed (or the permit expires) and the permittee is still unable to meet the WQBEL, the general mercury variance may be renewed. The renewal permit will include the annual average limit of 12 ng/L, as well as a new monthly average limit based on performance data from the previous twelve months. Ohio chose 12 ng/L as an annual average limit based on the statewide human health criterion for mercury prior to 1997 after determining that establishing a cutoff of 12 ng/L would avoid antidegradation review for most applicants. However, if a permittee cannot meet the annual average limit primarily because of mercury concentrations in its intake waters, the requirement to meet the 12 ng/L may be removed. (IWQC-IMA, SDMC)

Response: IDEM and the workgroup have reviewed Ohio's rule and some of the concepts are included in the draft SMV rule.

Comment: The rulemaking for a streamlined mercury variance needs to recognize that new methodologies 1631 and 1669 are expensive and very few laboratories are certified to conduct this analysis; therefore, the maximum monitoring frequency should be established at once per month for publicly owned treatment works. The potential cost for monitoring influent and effluent using Methods 1631/1669 according to estimates sought from an independent testing laboratory is estimated at twenty-two thousand six hundred twenty (\$22,620) dollars annually for weekly sampling frequency. (SDMC)

Response: IDEM does not dispute the stated cost estimate to sample and analyze for mercury using Methods 1631/1669. This type of information will be considered in the establishment of the appropriate monitoring frequency.

Comment: Michigan has established a multiple discharger variance (MDV) for mercury because the state has determined that imposition of end-of-pipe treatment technologies would result in an unreasonable economic burden on permittees. The state encourages the use of pollution prevention, source control, and other waste minimization programs instead of end-of-pipe treatment to address mercury discharges. The MDV is used in the re-issuance of permits containing mercury limits or monitoring provisions, and eliminates the requirement that the permittee submit feasibility, antidegradation, and risk characterization demonstrations. Michigan includes a MDV with a reissued permit without requiring an application from the permittee. The reissued permits generally allow at least one year of monitoring using Method 1631 before a new limit becomes effective. The MDV requires that a limit be set at a level currently achievable (ALCA), that a PMP be implemented, and that the discharger make reasonable progress toward achieving the WQBEL. Michigan has established the default LCA at 30 ng/L as a rolling 12-month average. Dischargers may request a higher limit based on at least twelve months of Method 1631 data demonstrating a higher LCA. Unlike in Ohio, however,

permittees need not apply for an individual variance to obtain a higher limit. (IWQC-IMA)

Response: IDEM and the workgroup have reviewed Michigan's approach and some of the concepts are included in the draft SMV rule.

Comment: The Indiana streamlined variance rule needs to clarify that a discharger is still able to apply for an individual variance if qualification for or compliance with the statewide mercury permit conditions does not mesh with site-specific conditions. (INDP)

Response: Every NPDES permit holder is eligible to apply for an individual variance under existing rules. The passage of a rule for a streamlined mercury variance will not prevent any discharger from applying for an individual variance.

Comment: As with Ohio and Michigan, Wisconsin has determined that requiring treatment technology to meet water quality standards for mercury would result in substantial and widespread adverse social and economic impacts and that mercury source reduction activities are environmentally preferable to implementation of treatment technologies in many cases due to adverse environmental impacts in other media. Therefore, as of November 1, 2002, Wisconsin's regulations allow existing dischargers to apply for an alternative mercury effluent limitation when they apply for a renewal permit. Applicants for an alternative mercury limit must state the basis for concluding that treatment technology for mercury is impracticable, supply at least two years of mercury effluent monitoring data, and include a PMP plan. If an alternative limitation is granted, the permit will establish a daily maximum mercury limit equal to the upper 99th percentile of representative daily discharge concentrations and will require that the permittee implement a mercury PMP. Although it does not seem necessary, if Indiana wishes to establish a shorter-term daily maximum mercury limit, a percentile approach like that taken in Wisconsin is recommended. (IWQC-IMA)

Response: The draft rule establishes a procedure for establishing an interim mercury limit that is based on a review of the most available mercury effluent data from the facility.

Comment: IDEM should establish the mercury limit under variance using log-normal procedures found in the EPA Technical Support Document for Water Quality-Base Toxics Control, EPA/505/2-90-001. The monthly average would be based on the 95th probability percentile and the daily maximum would be based on the 99th probability percentile. (SDMC)

Response: This approach is one of many being considered as the basis for the interim effluent limits for mercury for a facility that obtains a mercury variance.

Comment: The EPA approved statewide mercury variance programs in Ohio, Michigan, and Wisconsin should be used in Indiana as a model supplemented with information specific to Indiana. The language developed for the Triennial Review draft rule published at second notice in February 1999 should be used for the statewide mercury variance. A long term average to qualify for a statewide mercury variance should be modified from the initially proposed 12 ng/l. as an annual average to 30 to 40 ng/l as a rolling average. Backsliding prohibition should not be an issue. (IWQC-2002, USS)

Response: IDEM and the workgroup have studied and will continue to study the streamlined variance processes and rules developed by other states and approved for use by EPA. IDEM will utilize the knowledge gathered by studying the other states rules and processes to develop Indiana's streamlined variance rule. As well, the rule language contained in the February 1999 Triennial Rule draft has been considered in this rulemaking.

Comment: It is suggested that the Indianapolis 2001 updated individual variance application be used as the specific information to supplement the Ohio economic impact analysis to support a statewide mercury variance in Indiana. (INDP)

Response: All applicable information including the individual mercury variance application from the City of Indianapolis will be considered in the rulemaking.

Comment: Current Great Lakes system rules at 327 IAC 5-2-11.5(b) require that IDEM establish reasonable potential based on even an available single datum point, a process that does not account for the natural variability of data. Existing or extended NPDES permits may not contain a requirement for using the new, more sensitive EPA Method 1631, but if a municipality voluntarily measures effluent with the new procedure then data are available to perform a RPE (reasonable potential to exceed) analysis when the permit is renewed with permit limits then established based on the wildlife criteria. Based on this situation, any streamlined variance process must start with ample time for permittees to collect sufficient data to capture the variability of mercury in the effluent and influent data. An initial renewal period should be used for developing and implementing a PMP with specific measurable milestones. Six months prior to the expiration of the initial renewal period, IDEM will conduct a RPE analysis to determine if the permittee is eligible for a statewide variance. If the RPE analysis indicates the permittee can comply with the WQBELs, then the permittee is not eligible for a statewide variance. (SDMC)

Response: The current Great Lakes system rules do allow IDEM to establish the reasonable potential to exceed (RPE)

water quality standards using just one datum point, and the multiplying factor is designed to account for the variability of data. For that reason, the multiplying factor decreases with an increase in the number of data points. It is correct to say that an RPE analysis will take place during a permit renewal, and, if mercury effluent data are available using Method 1631/1669, then IDEM is required to conduct an RPE analysis for mercury. IDEM encourages facilities to collect and analyze their effluent using Method 1631/1669 so that the RPE analysis can be conducted using as large a data set as possible. IDEM agrees that when a facility does not demonstrate a RPE for mercury then limits for mercury will not be placed in that facility's permit.

Comment: If mercury variance permit limits are necessary, those limits should be expressed as a rolling annual average. Mercury is regulated to prevent long-term effects on human health and wildlife from bioaccumulation of mercury in fish. Such bioaccumulation occurs over time and only after methylation of any mercury in wastewater discharges. Permit limits should be expressed as a long-term average to correspond with the long-term effects sought to be prevented. (IWQC-IMA)

Response: The existing rule at 327 IAC 5-2-11(d) regarding the period of time addressed by permit limits states: "For continuous dischargers, all interim and final permit effluent limitations, including those necessary to achieve water quality standards, shall be stated, unless impracticable, as maximum daily and average monthly discharge limitations for all dischargers, except that, for POTWs average weekly and average monthly discharge limitations shall be used for BOD, TSS, and ammonia nitrogen." The use of these established time periods must be shown to be impracticable before a different time period can be used.

Comment: The long-term (annual average) limit in each permit should be determined based on historical performance data analyzed using Method 1631. If insufficient low-level data is available, the variance process should allow the discharger adequate time to gather the necessary data before a lower limit is imposed. In the interim, a compliance level consistent with the existing compliance level of 500 ng/l should be applied. (IWQC-IMA)

Response: The draft rule provides for the establishment of an interim mercury limit based on a review of the most recently available mercury effluent data.

Comment: A streamlined variance should allow a long-term average effluent concentration higher than the current 12 parts per trillion (ppt). Valid low-level data since 1999 shows total mercury in Indiana municipal effluents ranging from 1 to 70 ppt. IDEM should establish a reasonable long-term average threshold to be used to qualify a discharger for application of the statewide mercury variance. (INDP)

Response: The draft rule provides for the establishment of an interim mercury limit based on a review of the most recently available mercury effluent data.

Comment: If Indiana elects to establish an initial default annual average mercury limit statewide, that limit should be determined by using existing discharge data to determine the level that most dischargers can comply with while implementing mercury reduction measures. A default limit should be in the range of 30 to 40 ng/L. Individual dischargers should be allowed to obtain a higher annual average limit upon submission of supporting historical performance and/or intake water data. (IWQC-IMA)

Response: The draft rule provides for the establishment of an interim mercury limit based on a review of the most recently available mercury effluent data.

Comment: Indiana's streamlined mercury variance process should allow dischargers to apply for a mercury variance at any time including in conjunction with a renewal permit application. In the alternative, Indiana may wish to consider adopting a procedure similar to Michigan's, which does not require an application but is automatically applied during the permit renewal process. If the majority of permittees must seek variances, this option may be preferable to requiring applications because it promotes efficiency. (IWQC-IMA)

Response: The draft rule does allow submission of an SMV application at any time. At renewal, the SMV application can accompany the renewal application.

Comment: Dischargers should not be required to demonstrate why implementation of treatment technology is not feasible and should not be required to demonstrate widespread social and economic impact of implementing treatment technology. Numerous studies have demonstrated the feasibility issues of mercury treatment technologies and their socioeconomic effects have been sufficiently demonstrated. It is therefore unnecessary to require each discharger to perform the same analysis. (IWQC-IMA)

Response: The draft SMV rule is consistent with this comment.

Comment: Indiana should not require individual dischargers to submit antidegradation demonstrations when applying for the streamlined mercury variance because of the widespread inability to comply with low-level mercury limitations. (IWQC-IMA)

Response: The draft rule language does not require submission of an antidegradation requirement.

Comment: The mercury limits established pursuant to the variance process should be renewable as long as the discharger continues to make reasonable progress toward meeting water quality standards through implementation of such feasible, cost-effective mercury reduction measures as are available. (IWQC-IMA)

Response: The draft rule language establishes the procedure for obtaining a renewal that is consistent with this comment.

Comment: How is human health or fish life benefitted by requiring dischargers to perform extensive research projects or costly variance procedures? (BRO)

Response: This rule is intended to provide a mechanism consistent with the federal Clean Water Act that addresses the difficulty of complying with the required mercury limit.

Comment: Pollutant Minimization Plans (PMPs) are a common element of many variance programs. However, as it concerns a streamlined mercury variance process, if PMPs are required, they should not impose onerous requirements on wastewater dischargers. It is unfair and unnecessary to saddle already strained point sources with expensive PMP requirements that will likely have no significant affect on mercury in fish. (IWQC-IMA, NIPSCO)

Response: IDEM does not intend to impose onerous requirements on wastewater dischargers as part of a pollutant minimization program. IDEM recognizes that mercury levels in fish are not attributable to only point source dischargers. IDEM is working under the authority of the Clean Water Act to implement the NPDES Permit program in accordance with federal regulations and statutes.

Comment: The rule must require PMPs that are actually implemented for dischargers of mercury. In fact, PMPs should be a requirement of all dischargers of bio-accumulating chemicals of concern (BCCs). (SDC)

Response: The draft rule requires the development of a PMPP to assure that all reasonable efforts are being made to minimize mercury discharges.

Comment: A streamlined mercury variance rule should avoid detailed planning processes that delay the actual implementation of reasonable steps to eliminate mercury from getting into the sewer system. Planning should be reserved for those facilities that make progress in reducing mercury in the influent but still have average levels over twenty (20) parts per trillion in the outfall at the end of the first streamlined variance period. An individual variance application for mercury should be required for facilities not showing demonstrated progress in reducing mercury levels in the influent at the end of the first streamlined variance period. (IKE)

Response: These suggestions were discussed in the workgroup rulemaking discussions.

Comment: If the streamlined mercury variance process includes a PMP requirement, the language should be flexible enough to account for the differences between dischargers. Ohio's PMP approach is a good model and consists of the following three elements: "1) A control strategy for locating, identifying, and, where cost-effective, reducing the sources of the pollutant that contribute to discharge levels. A PMP is not necessarily related to pollution prevention, but examining pollution prevention alternatives is encouraged. PMP strategies may include any cost-effective process for reducing pollutant levels, including pollution prevention, treatment, best management practices or other control mechanisms; 2) monitoring to track the progress of the PMP; and 3) an annual report of the results of the PMP." Dischargers should be allowed to extend PMP implementation into subsequent permit renewal terms rather than be required to complete the plan during a single permit cycle. (IWQC-2002, IWQC-IMA)

Response: The draft rule is generally consistent with this comment. In Indiana, there is a statutory constraint on the renewal of variances to water quality standards.

Comment: IDEM should assist municipalities in designing source surveys and pollution prevention programs, including finding funding for the programs, conducting community outreach programs, and coordinating mercury reduction within the land, air, water quality, drinking water, and pollution prevention departments of IDEM and with other state and federal agencies. (INDP)

Response: IDEM plans to assist municipalities in the design of PMPs. IDEM agrees that mercury reduction efforts should be coordinated between all affected offices within IDEM.

Comment: U.S. Geological Survey studies find only a moderate correlation between total mercury and the mercury content in fish. (*A National Pilot Study of Mercury Contamination of Aquatic Ecosystems Along Multiple Gradients: Bioaccumulation in Fish*, Dave Krabbenhoft, et. al. (2001)). The studies indicate that methylmercury in the water column correlates best with mercury content in fish. Therefore, regulating total mercury likely is not a good measure of potential environmental harm. In the above referenced study there was no correlation between total mercury in sediments and mercury content in fish. Also, the initial results from the Metaalocus (Mercury Experiment to Assess Atmospheric Loading in Canada and the U.S.) project may indicate that direct deposition mercury is more bio-available than mercury input from the watershed. In other words, mercury from point sources may not have a significant affect on the mercury content in fish. (IWQC-IMA)

Response: This draft rule focuses on providing individual wastewater direct dischargers having more than the allowable amount of mercury in their wastewater with a mechanism for addressing the situation and directing their efforts toward meeting the required mercury effluent limit.

Comment: Certain stakeholders have proposed that IDEM should require reductions in mercury emissions from air sources as a prerequisite either for adopting a streamlined mercury variance process or for dischargers to be eligible for the variance. Air emission reductions cannot be mandated by the Water Pollution Control Board, which only possesses authority to adopt rules concerning water quality and pollution. (*See generally*, Ind. Code ‘ 13-18-3, which addresses the powers and duties of the Water Pollution Control Board.) Therefore, IDEM should not include this requirement in its mercury variance process. (INDP, IWQC-IMA, BRO)

Response: IDEM agrees that the air pollution control board has the authority to address mercury air deposition and is the correct board to address such matters. The water pollution control board, in accordance with IC 13-18-3-1 and the CWA Sec. 1251, has the authority to address only the discharge of pollutants into water. Reductions in air sources are not being considered as an element of a SMV.

Comment: The first notice ignores the contributions of mercury to Indiana waterways from nonpoint sources such as storm water run-off, land application of farm biosolids, and air deposition of mercury primarily from power plants. Indiana needs to develop a comprehensive multimedia mercury policy that utilizes regulation, encourages cooperation, and includes public education to ultimately reduce mercury in our water. It is not beyond Indiana’s power to begin a multimedia strategy that engages all of IDEM’s rulemaking boards in developing such a multimedia process. (SDC)

Response: The streamlined mercury variance rule will only be directed toward point source dischargers that hold NPDES permits because they are the facilities that need a variance from the water quality standards for mercury. IDEM recognizes that there are other sources of mercury, but they do not need a variance from the water quality standards for mercury.

Comment: IDEM records show that Indiana had more than one billion gallons of bypasses and sanitary sewer overflows (SSO) in 2002. In the first eight months of 2002, the combined sewer overflows (CSO) totaled about ten billion gallons. Highest priority should be placed on indirect dischargers to cities that have more than a few CSOs, SSOs, or bypasses whether these events occur in wet weather or not. The estimated removal costs in the published first notice ignore the fact that much of the mercury is bypassing treatment. Getting bypasses, SSOs, and CSOs through biological treatment will remove a great deal of mercury at costs far below those cited in the notice. These sewage discharges are already subject to a plan to get them to receive biological treatment. The goal of any rulemaking should be to reduce the levels of mercury in these untreated discharges until municipalities get them under control consistent with the Long Term Control Plan and other legal requirements. (IKE)

Response: IDEM concurs that PMPs developed by municipalities with CSOs and SSOs should address the mercury being discharged by these point sources.

Comment: Are mercury monitoring and limits in wastewater consistent with the land application program? Are the limits of the land application of biosolids going to be affected? If dischargers do recover mercury, how will it be disposed? Are we creating a larger danger of human health and environmental impairment by concentrating the metal instead of presently allowing it to exist in the environment while potential sources of mercury are identified and reduced? (BRO)

Response: According to IDEM’s Office of Land Quality (OLQ) there is not a problem with the levels of mercury in municipal biosolids. OLQ has provided the following: The ceiling limit for mercury in biosolids that are land applied is 57 mg/kg on a dry weight basis. For a biosolid to meet “exceptional quality” criteria, it must contain less than 17 mg/kg mercury. For the year 2002, the average mercury concentration in biosolids that were land applied was less than 2.3 mg/kg. This doesn’t include biosolids that were under the marketing and distribution program or any of the industrial waste products regulated by OLQ. In the case of an analysis result that is a non-detect, IDEM requires the detection limit to be used. This would mean 2.3 mg/kg would be worst case, but the real number could be much lower. OLQ has recently implemented a rule change that requires mercury detection limits be no more than 2 mg/kg; therefore, future annual average mercury concentrations will be lower and closer to actual values present. OLQ reports rarely seeing actual concentrations even approaching the exceptional quality limit or an analysis that exceeded the ceiling limit unless it was just a detection limit problem.

Comment: EPA has issued a “desk statement” that contains the agency’s official response, as follows: “Domestic control programs, like the Clear Skies Initiative and existing MACT Standards for municipal and medical waste incineration, will decrease mercury contamination of surface waters in the United States. In many locations, full implementation of Clear Skies and the MACT standards will be sufficient to eliminate health advisories and meet water quality standards. In some locations, however, the contribution of sources outside the United States will have to be

decreased if mercury levels are to be brought below water quality standards.”. It is notable that this statement from EPA makes no mention of the need to reduce mercury in wastewater discharges. (IWQC-IMA)

Response: Point source discharges are acknowledged as but one of the contributors to the problem of mercury levels in fish. Under the authority granted to the water pollution control board, this rulemaking is underway to provide a streamlined mechanism to address situations in which dischargers may not meet their required mercury effluent limit.

REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#03-130(WPCB) [Mercury SMV]

MaryAnn Stevens

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, Room 1255, 100 North Senate Avenue, 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 it is not necessary to follow a faxed comment letter with another sent through the postal system.

COMMENT PERIOD DEADLINE

Comments must be postmarked, hand delivered, or faxed by June 30, 2004.

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

DRAFT RULE

SECTION 1. 327 IAC 5-3.5 IS ADDED TO READ AS FOLLOWS:

Rule 3.5. Streamlined Mercury Variance Requirements and Application Process

327 IAC 5-3.5-1 Purpose

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-18-4

Sec. 1. The purpose of this rule is to establish a process and application requirements for obtaining a streamlined variance from a water quality criterion used to establish a water quality-based effluent limitation established for mercury in a National Pollutant Discharge Elimination System (NPDES) permit. (*Water Pollution Control Board; 327 IAC 5-3.5-1*)

327 IAC 5-3.5-2 Applicability

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-14-8-9; IC 13-18-4

Sec. 2. (a) A streamlined mercury variance (SMV) shall be available for the duration of the NPDES permit issued to a wastewater discharging facility that has a NPDES permit in effect containing a discharge limitation for mercury that cannot be achieved by the facility.

(b) Application for a variance under this rule meets the requirements for a variance under IC 13-14-8-9 and rules adopted by the board.

(c) A SMV is not available for the following:

- (1) New or recommencing Great Lakes system dischargers except as provided under 327 IAC 2-1.5-17(a)(3).
- (2) Applicants seeking an interim limit whose effluent contains mercury at an average concentration greater than thirty (30) ng/l (parts per trillion).

(Water Pollution Control Board; 327 IAC 5-3.5-2)

327 IAC 5-3.5-3 Definitions

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-11-2; IC 13-18-4

Sec. 3. In addition to the definitions contained in IC 13-11-2 and 327 IAC 5, the following definitions apply throughout this rule:

- (1) “Department” means the Indiana department of environmental management.
- (2) “Facility” means any NPDES point source or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program. For a municipality, “facility” means a publicly owned treatment works (POTW).
- (3) “Pollutant minimization program” or “PMP” means a program developed by a SMV applicant to identify and minimize the discharge of mercury into the environment.
- (4) “Pollutant minimization program plan” or “PMPP” means the plan for development and implementation of the PMP.
- (5) “Publicly owned treatment works” or “POTW” means a treatment works as defined by Section 212(2) of the Federal Water Pollution Control Act owned by the state or a municipality as defined by Section 502(4) of the Federal Water Pollution Control Act.
- (6) “Streamlined mercury variance” or “SMV” means a process established under this rule for obtaining a variance from the water quality criterion used to establish a water quality-based effluent limitation (WQBEL) established for mercury in a NPDES permit.

(Water Pollution Control Board; 327 IAC 5-3.5-3)

327 IAC 5-3.5-4 Initial SMV application

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-18-4

Sec. 4. (a) The initial SMV application shall be submitted on forms provided by the department.

(b) An applicant for a SMV may submit the application as a part of an application for a:

- (1) new;
- (2) renewed; or
- (3) modified;

NPDES permit.

(c) The initial SMV application must include all information required under section 9 of this rule, PMPP requirements.

(d) Upon receipt of a complete SMV application, the department will publish a notice of completeness and availability of the SMV in accordance with section 5 of this rule, public notice of SMV application.

(e) In order for an application to be considered complete, it must contain all information required under section 9 of this rule, PMPP requirements. *(Water Pollution Control Board; 327 IAC 5-3.5-4)*

327 IAC 5-3.5-5 Public notice of SMV application

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 4-21.5; IC 13-18-4

Sec. 5. (a) The department shall publish notice of each complete SMV application for public comment:

- (1) in the newspaper with the greatest circulation in the city or county of the applicant's location; and
- (2) with a thirty (30) day public comment period.

(b) Public notice may be held simultaneously with the public notice procedures of a new, renewed, or modified NPDES permit.

(c) The department may hold a public hearing on the complete SMV application if a request is received during the public comment period. The public hearing may be held simultaneously with the public hearing on a new, renewed or modified NPDES permit.

(d) The department shall consider public comments received during:

- (1) the public comment period; and
- (2) the public hearing, if one is held.

(e) If the SMV application meets the requirements of this rule, the department shall incorporate the SMV into the NPDES permit in accordance with this rule within ninety (90) days, unless the applicant agrees to a longer time frame, following the close of the later of the following:

- (1) The public comment period.
- (2) The public hearing.

(f) A final determination under subsection (e) is an appealable decision under IC 4-21.5. (*Water Pollution Control Board; 327 IAC 5-3.5-5*)

327 IAC 5-3.5-6 Issuance of SMV

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-14-8-9; IC 13-18-4

Sec. 6. When a SMV is issued under this rule, the SMV shall be incorporated as a condition of the applicant's NPDES permit through issuance, renewal, or modification of the NPDES permit. The SMV remains in effect until the NPDES permit expires under IC 13-14-8-9. (*Water Pollution Control Board; 327 IAC 5-3.5-6*)

327 IAC 5-3.5-7 Renewal of SMV

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-14-8-9; IC 13-18-4

Sec. 7. (a) An eligible applicant may apply for a renewal of the SMV:

- (1) one hundred eighty (180) days prior to the expiration of its NPDES permit; or
- (2) within one hundred eighty (180) days after issuance of a revised NPDES permit that establishes a revised mercury discharge limit based on the water quality criteria.

(b) The department may renew an initial SMV in accordance with IC 13-14-8-9 if the applicant demonstrates that implementation of the PMPP has achieved progress toward the goal of reducing mercury from its discharge.

(c) A renewal application shall contain the following:

- (1) All information required for an initial SMV application under section 4 of this rule, including revisions to the PMPP, if applicable.

- (2) A report on implementation of each provision of the PMPP.
- (3) An analysis of the mercury concentrations in the influent and effluent for the two (2) year period prior to the SMV renewal application.
- (4) A proposed alternative mercury discharge limit, if appropriate, based on the most recent two (2) years of representative sampling information from the facility.

(d) A PMPP must be revised if implementation of the original PMPP does not lead to demonstrable progress in minimizing the discharge of mercury. If the applicant can provide information, as part of a revision to a PMPP, that demonstrates there is no known reasonable additional action that will reduce mercury in the influent or effluent, the PMPP may remain as previously approved.

(e) A renewal SMV shall be issued in accordance with the requirements for the issuance of an initial SMV under this rule. (*Water Pollution Control Board; 327 IAC 5-3.5-7*)

327 IAC 5-3.5-8 SMV interim discharge limitation

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-18-4

Sec. 8. (a) The interim limit for mercury discharge during the duration of a SMV shall be based on representative effluent data that has been analyzed using Analytical Method 1631. The interim limit shall be expressed as a twelve (12) month rolling average that is derived by using the highest daily value for mercury from a data set that includes a minimum of ten (10) data points equally spaced over a twelve (12) month period up to a maximum period using the most recent two (2) years of data. The highest daily value will become the value for the twelve (12) month rolling average. A SMV is not available to an applicant that requests an interim limit above thirty (30) ng/l.

(b) The interim discharge limit shall be evaluated upon receipt of a renewal SMV application based upon available, valid, and representative data of the effluent levels for mercury collected and analyzed over the most recent two (2) year period. Data collection and analyses must be done according to the analytical method approved by the department. (*Water Pollution Control Board; 327 IAC 5-3.5-8*)

327 IAC 5-3.5-9 PMPP requirements

Authority: IC 13-13-5-1; IC 13-13-5-2; IC 13-14-8; IC 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

Affected: IC 13-18-4

Sec. 9. (a) A PMPP for a facility must be submitted with an application for a SMV. The PMPP must contain the following:

- (1) Results of a preliminary inventory of potential uses and sources of mercury in all buildings and departments and a plan and schedule for providing the department results of a complete inventory.
- (2) Preliminary identification of known mercury-bearing equipment, waste streams, and mercury storage sites.
- (3) A list of planned activities to be conducted to eliminate or minimize the release of mercury to the water. The list of planned activities must include, at a minimum, the following:
 - (A) A review of purchasing policies and procedures.
 - (B) Necessary training and awareness for facility staff.
 - (C) Evaluation of alternatives to the use of any mercury-containing equipment or materials.
 - (D) Other specific activities related to the type of mercury on-site.
 - (E) An identification of the facility's responsibilities under P.L.225-2001.
- (4) For each activity specified in subdivision (3), the plan must contain the goal to be accomplished, a measure of performance, and a schedule for action.
- (5) Available mercury influent and effluent data and biosolids, if applicable, for the two (2) year period preceding the SMV application.
- (6) Identification of the resources and staff necessary to implement the PMPP.

- (7) Proof of completion of public notice activities required under this section.
- (8) A schedule for submission of annual reports describing the facility's progress toward:
 - (A) fulfilling each of the requirements of the PMPP;
 - (B) results of mercury monitoring; and
 - (C) implementation of each planned activity to reduce or eliminate mercury from the facility's water.

Upon approval of the SMV, the applicant must submit an annual report according to the schedule in the PMPP.

(b) In addition to subsection (a), a PMPP for a publicly owned treatment works must include the following:
(1) Results of a preliminary evaluation of possible mercury sources in the facility's influent and a plan and schedule for providing the department results of a complete evaluation. The evaluation shall include, at a minimum, the following:

(A) Medical facilities, for example, the following:

- (i) Hospitals.
- (ii) Clinics.
- (iii) Nursing homes.
- (iv) Veterinarians.

(B) Dental clinics.

(C) Public and private educational laboratories.

(D) General industry.

(E) Residential and retail contributions of mercury, for example, the following:

- (i) Thermostats.
- (ii) Automobile and appliance switches.
- (iii) Dairy manometers.
- (iv) Others specific to the community served.

(F) An identification of the responsibilities under P.L.225-2001 for the significant industrial users for the POTW.

(2) A list of planned activities designed to reduce or eliminate mercury loadings from the sources identified in subdivision (1).

(3) For each activity specified in subdivision (2), the plan must contain the goal to be accomplished, a measure of performance, and a schedule for action.

(4) In addition to activities required under subsection (a)(3), activities must also include an education program for the facility employees and the public within the service area of the facility.

(c) Prior to submitting the draft PMPP to the department as part of the SMV application, an applicant shall publish notice of the availability of the draft PMPP in a daily or weekly newspaper of general circulation throughout the area affected by the discharge. The applicant shall also post a copy of the information required by this section at the principal office of the municipality or political subdivision affected by the facility or discharge and at the United States post office and, if one is available, library serving those premises.

(d) All notices published under this section shall contain the following information:

(1) The name and address of the applicant that prepared the PMPP.

(2) A general description of the elements of the PMPP.

(3) A brief description of the activities or operations that result in the discharge for which a SMV is being requested.

(4) A brief description of the purpose of this notice and the comment procedures.

(5) The name of a contact person, a mailing address, an internet address, if available, and a telephone number where interested persons may obtain additional information and a copy of the PMPP.

(e) The applicant shall provide a minimum comment period of thirty (30) days and include a copy of the comments received and the applicant's responses to those comments in the SMV application submitted to the department.

(f) The department shall consider a PMPP to be complete if it meets the requirements of this section. (*Water*

Pollution Control Board; 327 IAC 5-3.5-9)

Notice of Public Hearing

Under IC 4-22-2-24, IC 13-14-8-6, and IC 13-14-9, notice is hereby given that on September 8, 2004, at 1:30 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room A, Indianapolis, Indiana the Water Pollution Control Board (board) will hold a public hearing on amendments to rules concerning water quality.

The purpose of this hearing is to receive comments from the public prior to preliminary adoption of this rule by the board. All interested persons are invited and will be given reasonable opportunity to express their views concerning the drafted new rule. Oral statements will be heard, but, for the accuracy of the record, all comments should be submitted in writing.

Additional information regarding this action may be obtained from MaryAnn Stevens, Rules Section, Office of Water Quality, (317) 232-8635 or (800) 451-6027 (in Indiana).

Individuals requiring reasonable accommodations for participation in this event should contact the Indiana Department of Environmental Management, Americans with Disabilities Act coordinator at:

Attn: ADA Coordinator

Indiana Department of Environmental Management

100 North Senate Avenue

P.O. Box 6015

Indianapolis, Indiana 46206-6015

or call (317) 233-1785 (V) or (317) 232-7589 (TDD). Please provide a minimum of 72 hours' notification.

Copies of these rules are now on file at the Office of Water Quality, Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255 and Legislative Services Agency, One North Capitol, Suite 325, Indianapolis, Indiana and are open for public inspection.

Tim Method

Deputy Commissioner

Indiana Department of Environmental Management