



Ohio Administrative Code

Rule 3745-1-38 Methodologies for development of human health criteria and values for the lake Erie drainage basin.

Effective: February 6, 2017

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules and federal statutory provisions referenced in this rule, see rule 3745-1-03 of the Administrative Code.]

(A) Applicability. The director may grant a variance to a water quality standard (WQS, where WQS, for the purpose of this rule, means criteria and tier II values adopted in or developed under this chapter) which is the basis of a water quality-based effluent limit (WQBEL) included in a national pollutant discharge elimination system (NPDES) permit. A WQS variance applies only to the permittee requesting the variance and only to the pollutant or pollutants specified in the variance. A variance does not affect, or require the director to modify, the corresponding water quality standard for the water body. All variance requests and approvals must comply with applicable portions of rule 3745-1-05 of the Administrative Code. This rule shall not apply to any of the following:

(1) To any building, structure, facility, or installation from which there is or may be a "discharge of pollutants" (as defined in 40 C.F.R. 122.2), the construction of which commenced after March 23, 1997, unless:

(a) Such a discharge occurs as a result of a response or remedial action taken pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, or the Ohio EPA voluntary action program (VAP).

(b) WQS or method detection limit is issued, modified, or adopted after the NPDES permit for the discharge is issued.

(c) The discharge results from rerouting all or a portion of an existing permitted discharge to a new discharge point that discharges to the same body of water, and there is a pollutant reduction in the discharge being rerouted.



(d) A new or expanded discharge of bioaccumulative chemicals of concern from a publicly owned treatment works or sewerage system is necessary to prevent or mitigate a public health threat to the community.

(e) The discharge occurs as a result of an overall reduction in emissions of a pollutant from a facility existing as of March 23, 1997 to air, waters of the state or other media to which people or aquatic life are exposed.

(2) To any source for which an NPDES permit was revoked or not renewed and for which a new NPDES permit has been subsequently issued, except that such a source may be eligible to receive a variance if WQS or method detection limit is issued, modified, or adopted after the source's new NPDES permit is issued.

(3) If the variance would likely jeopardize the continued existence of any threatened or endangered species as defined in rule 3745-1-02 of the Administrative Code or result in the destruction or adverse modification of such species' critical habitat.

(4) If WQS will be attained by implementing effluent limits required under sections 301(b) and 306 of the act as defined in rule 3745-33-01 of the Administrative Code and by the permittee implementing cost-effective and reasonable best management practices for nonpoint source control over which the permittee has control.

(B) Maximum time frame for variances. A WQS variance shall not exceed five years or the term of the NPDES permit, whichever is less, with the exception that a WQS variance may remain in effect beyond the term of the NPDES permit if, at least one hundred eighty days prior to the date of expiration of the NPDES permit, the applicant submits to the director an application for renewal of the NPDES permit, in accordance with Chapter 119. of the Revised Code and paragraph (C) of rule 3745-33-04 of the Administrative Code, and an application for renewal of the variance in accordance with paragraph (H) of this rule. Such a variance shall remain in effect until the director issues a final action on the NPDES permit renewal application unless the application for renewal of the variance is not substantially complete or not submitted within the time required in this paragraph, or unless the permittee did not substantially comply with the conditions of the existing variance. The director shall review and modify as necessary WQS variances as part of each WQS



review pursuant to section 303(c) of the act.

(C) Conditions to grant a variance.

(1) Except as provided in paragraph (J) of this rule, a variance may be granted if the director determines, based on data and information provided by the permittee or data and information independently available to the director, that attainment of the WQS is not feasible because of any of the following:

(a) Naturally occurring pollutant concentrations prevent the attainment of the WQS.

(b) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the WQS, unless these conditions may be compensated for by the discharge of sufficient volume of effluent to enable WQS to be met.

(c) Human-caused conditions or sources of pollution prevent the attainment of the WQS and cannot be remedied, or would cause more environmental damage to correct than to leave in place.

(d) Dams, diversions or other types of hydrologic modifications preclude the attainment of the WQS, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the WQS.

(e) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate cover, flow, depth, pools, riffles, and the like, unrelated to chemical water quality, preclude attainment of WQS.

(f) Controls more stringent than those required by sections 301(b) and 306 of the act would result in substantial and widespread economic and social impact. When evaluating substantial and widespread economic and social impact, the director shall consider, at a minimum, all of the following factors:

(i) The costs, cost-effectiveness (measured in dollars per pound equivalent), and affordability of pollutant removal that would result from implementing measures capable of attaining the WQS.



- (ii) The reduction in concentrations and loadings attainable by using measures capable of attaining the WQS.
 - (iii) The financial effects on the permittee of implementing measures capable of attaining the WQS.
 - (iv) The type and magnitude of adverse or beneficial environmental impacts resulting from implementing measures capable of attaining the WQS.
 - (v) The overall impact on employment at the facility and on the economy of the area in which the discharger is located resulting from implementing measures capable of attaining the WQS.
- (2) In addition to the requirements of paragraph (C)(1) of this rule, the permittee shall do the following:
- (a) Show that the variance requested complies with the antidegradation requirements of rule 3745-1-05 of the Administrative Code.
 - (b) Characterize the extent of any increased risk to human health and the environment associated with granting the variance compared with compliance with the WQS absent the variance, such that the director is able to conclude that any such increased risk is consistent with the protection of the public health, safety, and welfare.
- (D) Submittal of variance application. The permittee shall submit an application for a variance to Ohio EPA. The variance application shall be considered a separate application from the NPDES permit application. The variance application shall include the following:
- (1) All relevant information demonstrating that attaining the WQS is not feasible based on one or more of the conditions in paragraph (C)(1) of this rule.
 - (2) All relevant information demonstrating compliance with the conditions in paragraph (C)(2) of this rule.
 - (3) An attachment to the application that includes the following information, at a minimum, if the



applicant is requesting a variance under paragraph (C)(1)(f) of this rule:

(a) For municipal dischargers:

(i) A general plan including a brief description of existing facilities; a brief description of lowest cost improvements to attain WQS; capital cost of improvements; and total annual operation and maintenance cost of facility after improvements.

(ii) Existing rate structure with a copy of the authorizing ordinance.

(iii) Audited financial reports for the previous five years.

(iv) Average daily flow for the following: total, residential, commercial, industrial, institutional/other, inflow and infiltration.

(v) Number of residential customers and non-residential customers served by the facility.

(vi) Any information that may indicate conditions in paragraph (C)(1) of this rule for granting a variance.

(b) For industrial dischargers:

(i) General plan including brief description of existing facilities; brief description of lowest cost improvements to attain WQS; capital cost of improvements; total operation and maintenance cost of facility after improvements.

(ii) Audited annual financial reports for the facility from the most recent five years.

(iii) Standard industrial classification for facility.

(iv) Total number of employees and total annual salary/wage/overhead costs.

(v) Any information that may indicate conditions for granting a variance.



(4) A plan of study if the variance is from a WQS for a bioaccumulative chemical of concern (BCC) in the lake Erie drainage basin. The plan of study shall include the following, at a minimum: data documenting the facility's current influent and effluent concentrations for the BCC; a preliminary identification of potential sources; a proposed schedule for evaluating those sources; and a proposed schedule for identifying and evaluating potential reduction, elimination, and prevention methods.

(E) Public notice of preliminary decision. Upon receipt of a complete application for a variance (or in the case of a variance under paragraph (J) of this rule, the information required by paragraphs (J)(1) and (J)(2) of this rule), and upon making a preliminary decision regarding the variance, the director shall public notice the variance application, the availability of the public record, the availability of the plan of study (if applicable) and the preliminary decision for public comment. For discharges in the lake Erie drainage basin, the other Great Lakes states and tribes shall be notified of the director's preliminary decision. These public notice requirements may be satisfied by including the supporting information for the variance and the preliminary decision in the public notice of a draft NPDES permit.

(F) Final decision on variance request.

(1) The director shall issue a variance or propose to deny a variance in accordance with Chapter 119. of the Revised Code. If all or part of the variance is approved by the director, the decision shall include all permit conditions needed to implement those parts of the variance so approved. Such permit conditions shall, at a minimum, require all of the following:

(a) Compliance with an initial effluent limitation that, at the time the variance is granted, represents the level currently achievable by the permittee, and that is no less stringent than that achieved under the previous permit.

(b) That reasonable progress be made toward attaining the WQS for the water body through appropriate permit conditions. If the variance was approved for a BCC in the lake Erie drainage basin or mercury statewide, the permittee shall develop and implement a pollutant minimization program (PMP) consistent with rule 3745-33-09 of the Administrative Code.



(c) When the duration of a variance is shorter than the duration of a permit, compliance with an effluent limitation sufficient to meet the underlying WQS upon the expiration of said variance.

(d) A provision that allows the director to reopen and modify the permit based on any Ohio EPA WQS revisions to the variance.

(e) Such monitoring or analyses as are necessary in order to assess the impact of the variance on public health, safety, and welfare, that may include tests of the amount of the variance parameter in the discharger's influent and effluent, in fish tissue of resident species in the receiving water, or in the sediments in the vicinity of the discharge.

(2) The director shall deny a variance request in accordance with Chapter 119. of the Revised Code if the permittee fails to make the demonstrations required under paragraph (C) of this rule. Permit issuance shall not be affected if the variance is denied. If all, part, or parts of the variance is denied by the director, the decision may include, if necessary, an interim effluent limitation as specified under paragraph (F)(1)(a) of this rule and a compliance schedule to meet final limits, at a minimum.

(G) Incorporating variance into permit. The director shall establish and incorporate into the permittee's NPDES permit all conditions needed to implement the variance as determined under paragraph (F) of this rule.

(H) Renewal of variance. A variance may be renewed, subject to the requirements of paragraphs (A) to (G) of this rule. As part of any renewal application, the permittee shall again demonstrate that attaining WQS is not feasible based on the requirements of paragraph (C) of this rule, unless the variance being renewed was approved under paragraph (J) of this rule. For variances approved under paragraph (J) of this rule, the permittee shall, as a part of any renewal application, resubmit the information required under paragraphs (J)(1) and (J)(2) of this rule, the certification required by paragraph (J)(4)(e) of this rule and the permit, as well as a status report on the progress being made in the pollutant minimization program. The permittee's application also shall contain information concerning its compliance with the conditions incorporated into its permit as part of the previous variance. Reasonable progress shall have been made in implementing the pollutant minimization program under the existing permit prior to renewing variances approved under paragraph (I) or (J) of this rule. The director may deny any variance renewal if the permittee did not comply with the



conditions of the previous variance.

(I) Multiple discharger determinations. Where necessary to address widespread WQS nonattainment issues, the director may make determinations about the factors listed in paragraphs (C) and (D) of this rule for a category of dischargers where the director has enough information to determine that variances are necessary for that category according to one or more of the conditions in paragraph (C)(1) of this rule. These determinations and specific application requirements shall be made by rule. Dischargers applying for a variance based on multiple discharger determinations shall submit information demonstrating that the determinations of the director are applicable to the individual discharger.

(J) The director has determined that the average cost to reduce mercury below twelve ng/l from a waste stream through end-of-pipe treatment is in excess of ten million dollars per pound of mercury removed. The director has determined that requiring removal of mercury by construction of end-of-pipe controls to attain mercury WQS, requiring controls more stringent than those required by sections 301(b) and 306 of the act would result in substantial and widespread social and economic impact. The director may determine whether there are other means by which the permittee could comply with the WQBEL without constructing end-of-pipe treatment based on the information provided by the permittee in the application submitted in accordance with this paragraph. The director has also determined that the increased risk to human health and the environment associated with granting the variance compared with compliance with the WQS absent the variance, is consistent with the protection of the public health, safety, and welfare.

(1) The director may grant a variance under paragraph (J) of this rule without giving any additional consideration to the factors specified in paragraphs (C)(1) and (C)(2)(b) of this rule where the director determines all of the following:

(a) That an average mercury WQBEL based on the human health or wildlife criteria adopted in this chapter would be necessary for a particular permittee to comply with water quality standards in the absence of a variance.

(b) That the permittee is not currently complying with the WQBEL and information available from the application required in paragraph (J)(2) of this rule indicates that there is no readily apparent



means of complying with the WQBEL without constructing end-of-pipe controls more stringent than those required by sections 301 (b) and 306 of the act.

(c) That the discharger is currently able to achieve or projects that it can achieve an annual average mercury effluent concentration of twelve ng/l within five years of the date that the variance is granted. For the purpose of determining eligibility under paragraph (J) of this rule, the annual average mercury effluent concentration shall be the average of the most recent twelve months of effluent data.

(2) In lieu of complying with the requirements of paragraph (D) of this rule, a discharger seeking a variance under paragraph (J) of this rule shall submit to the director an application containing the following information in writing:

(a) A certification that the discharger intends to be subject to the terms of paragraph (J) of this rule.

(b) A description of measures taken to date for mercury reduction or elimination projects.

(c) A plan of study for the identification and evaluation of potential mercury sources and potential methods for reducing or eliminating mercury from the discharger's effluent. The plan of study shall include the following, at a minimum: data documenting the facility's current influent and effluent mercury concentrations; identification of all known mercury sources; a description of current plans to reduce or eliminate known sources of mercury; a preliminary identification of other potential mercury sources; a proposed schedule for evaluating the mercury sources; and a proposed schedule for identifying and evaluating potential reduction, elimination, and prevention methods.

(d) An explanation of the discharger's basis for concluding that there are no readily available means of complying with the WQBEL without construction of end-of-pipe controls.

(e) A demonstration of compliance with the conditions in paragraph (C)(2)(a) of this rule.

(3) The director shall deny the applicability of paragraph (J)(1) of this rule to a discharger if the discharger fails to fulfill the requirements specified in paragraphs (J)(1) and (J)(2) of this rule.

(4) If the conditions of paragraphs (J)(1) and (J)(2) of this rule are met, the director shall issue the



variance and incorporate the following requirements, at a minimum, into the discharger's NPDES permit:

- (a) All conditions required under paragraph (F)(1) of this rule.
- (b) A requirement that the discharger's average mercury effluent concentration as defined in paragraph (J)(1) of this rule must remain less than or equal to twelve ng/l after the date specified in the discharger's accepted plan of study for the requirements under this paragraph to be applicable. The requirements of paragraph (J)(6) of this rule shall be included in the permit.
- (c) Permit conditions needed to implement the plan of study submitted under paragraph (J)(2)(c) of this rule.
- (d) A requirement that the discharger use an approved U.S. EPA analytical method that is capable of quantifying the applicable water quality standard.
- (e) A requirement that upon completion of the actions identified in the plan of study and in the PMP required by paragraph (F)(1)(b) of this rule, the permittee shall submit to the director a certification that all permit conditions imposed to implement the plan of study and PMP have been satisfied and shall include in this certification a statement as to whether compliance with the WQBEL has been achieved and can be maintained. This certification shall be accompanied by the following:
 - (i) All available data documenting the discharger's current influent and effluent mercury concentrations.
 - (ii) Data documenting all known significant sources of mercury and the steps that have been taken to reduce or eliminate those sources.
 - (iii) A determination of the lowest mercury concentration that currently available data indicate can be reliably achieved through implementation of the PMP.
- (5) Upon receipt of the certification required by paragraph (J)(4)(e) of this rule, the director shall take either of the following actions:



(a) If the permittee certifies that it has achieved and can maintain compliance with the WQBEL, the director shall incorporate the WQBEL into the permit in lieu of the variance either via a permit modification if the permit has not yet expired or as a part of any renewal of the permit if it has expired.

(b) If the permittee certifies that it has not achieved or can not maintain compliance with the WQBEL, the director shall review the data submitted with the certification and such other relevant information as may be available, and:

(i) If the director concurs with the certification, the director shall allow the variance to continue in force if the variance has not expired or renew the variance in accordance with paragraph (H) of this rule if the variance has expired.

(ii) If the director concludes, despite contrary certification by the permittee, that the permittee has achieved and can maintain compliance with the WQBEL, the director shall incorporate the WQBEL into the permit in lieu of the variance via a permit modification if the permit has not yet expired or as a part of any renewal of the permit if it has expired.

(6) If at any time after the date specified in a variance by which the discharger must meet an average annual mercury effluent concentration of twelve ng/l, as defined in paragraph (J)(1) of this rule, or after the director's final approval of the variance renewal, whichever is earlier, the discharger's average mercury effluent concentration as defined in paragraph (J)(1) of this rule exceeds twelve ng/l, the discharger shall submit an individual variance application, if a variance is desired, or request a permit modification for a compliance schedule to attain compliance with the WQBEL. Paragraph (J) of this rule shall no longer apply to the discharger on the date the director acts on the discharger's individual variance application or the date the permit modification becomes effective. The requirements of this paragraph shall not apply to the discharger if the discharger demonstrates to the satisfaction of the director that the mercury level in the discharger's effluent exceeds twelve ng/l due primarily to the presence of mercury in discharger's intake water.

(K) All variances and supporting information shall be made available by the director to the U.S. EPA region V office after the date of the final variance decision.



(L) WQS revisions. All variances shall be distributed with this chapter and shall be made available upon request to all interested parties. The distributed information shall include at a minimum: the discharger receiving the variance; the term (beginning and ending dates) of the variance; the water body or water bodies affected by the variance; the pollutants affected by the variance; and the modified allowable ambient concentration values for those pollutants.