

**Responsiveness Summary to Comments Received from Public Comment Period
for Revisions to Pollution Control Standards for Discharges to the Ohio River
2015 Revision and Proposed FirstEnergy Variance¹**

Mixing Zone

Comment: Not in favor of proposal to remove mixing zone ban given the mercury issues in the Ohio River and that the Ohio River tops the list of most polluted rivers. ORSANCO must enforce the October 2015 prohibition on mixing zones.

Comment: Maintain the October 16, 2015 deadline for the expiration of mixing zones. Invite discharges not able to meet the requirement to propose a settlement agreement or consent decree.

Comment: Do not grant any new variances or exceptions to the standards.

Comment: The variance procedure for the mixing zone ban must be removed.

Comment: If ORSANCO retains the variance procedure, all permittees must agree by October 2015 to implement necessary controls and substantiate their request with information on treatment options/costs, options for elimination or reduction of mercury, and project discharge levels. ORSANCO must receive regular reports from variance holders on their discharge of mercury, developments in treatment technologies with costs, and results of annual water and fish monitoring requirements. Variance holders should make defined payments into a fund to support mercury research.

Comment: ORSANCO should not be in the business of granting variances due to the lack of opportunity for meaningful judicial review. ORSANCO must deny all current and future variance requests.

Comment: Tripling the effluent concentration as proposed in the FirstEnergy variance could result in a 3000-fold increase in Hg concentrations in fish tissue due to the specific hydrology at that location.

Comment: Does not support the FirstEnergy variance due to the lack of work to identify sources or use of best technology for mercury removal.

Comment: The two-year variance proposed by ORSANCO does not allow adequate time to conduct the comprehensive evaluation necessary to conduct the work to achieve the required mercury reductions.

¹ The public hearing on the revisions to the Pollution Control Standards, held in Erlanger, Kentucky on April 14, 2015, also invited public comment on a request for a variance from the mixing zone prohibition for bioaccumulative chemicals of concern. That variance was granted, and was later eliminated at the October 2015 ORSANCO meeting after adoption of revisions to the Pollution Control Standards, which requires mixing zones be eliminated as soon as practicable, as determined by the state permitting authority, with respect to pre-2003 dischargers. Other variances from the mixing zone prohibition that were pending, and which were the subject of a public hearing on August 18, 2015 in Huntington, West Virginia, were denied at the October 2015 ORSANCO meeting, and the other existing variance terminated, as a result of these changes. For this reason, comments received are deemed resolved.

Comment: Pleasants had a mercury discharge concentration of 0.0554 ug/L in 2009 and believes there is a possibility of these discharge levels recurring. Therefore, the effluent values in the proposed variance of 0.022 ug/L and 0.044 ug/L are too stringent. They recommend that ORSANCO adopt WVDEP's interim limits of 0.187 ug/L and 0.577 ug/L.

Response: Since October 16, 2003, new dischargers of any of 22 listed bioaccumulative chemicals of concern (including mercury) into the mainstem of the Ohio River have been ineligible for a "mixing zone" in which the wastewater discharge is allowed to mix with river water before meeting instream water quality standards. This prohibition, which requires that the water quality standard for mercury be met at the "end-of-pipe," remains in place for new dischargers after 2003.

For those facilities discharging wastewater into the Ohio River prior to 2003, ORSANCO's former standards imposed a ban on mixing zones after October 16, 2015, but allowed ORSANCO to grant a variance allowing continued mixing zones after that date for such discharges, on a case-by-case basis. ORSANCO had approved two such variances, both in the state of West Virginia, prior to adoption of revisions to the Pollution Control Standards in October 2015.

The revision approved by the Commission in October, 2015 makes several changes to improve the process for decisions that will reduce and eliminate mixing zones for bioaccumulative chemicals of concern:

1. The October 16, 2015 date for the imposition of the mixing zone prohibition for pre-2003 dischargers of BCCs was eliminated, as is the need to seek a variance from ORSANCO from that prohibition.

2. The goal of elimination of mixing zones for BCCs remains, and is advanced by requiring a more rigorous demonstration by the discharger than the former variance procedure. The goal as restated is to eliminate such mixing zones "as soon as is practicable," considering technological and economic feasibility on a case-by-case basis. Whether to allow any mixing zone for the pre-2003 dischargers of BCCs will be made during the state wastewater permit process, and will depend on what measures the discharger has taken and proposes to take during the next permit cycle to reduce or eliminate the need for a mixing zone, as well as the concentration, duration, and exposure conditions for each BCC for which a mixing zone is sought. Unlike the current ORSANCO variance process, the justification for any mixing zone will be subject to review during each permit renewal or reissuance, and is subject to more formal opportunities for public comment and administrative and judicial review of the permitting decision.

The Commission remains committed to the elimination of all mixing zones for bioaccumulative chemicals of concern. Strengthening the demonstration by the discharger of the actions that they have and will take to reduce and eliminate the use of mixing zones, will lower mercury loading into the Ohio River in a more robust and transparent way than under the former standard, which allowed variances on the basis of a less rigorous test.

Comment: ORSANCO should prepare an annual report on discharges with mixing zones for mercury, including the level of mercury in each discharge, the cumulative discharge of mercury, and control technology options. The report should be adopted into the standards.

Response: The Commission has established a committee to consider needed mercury studies for the Ohio River. The need for such information will be considered by the committee. However, the Pollution Control Standards would not be an appropriate vehicle for retaining technical reports.

Comment: Supports proposed revisions to the mixing zone ban. The current requirements are impractical for POTW discharges.

Response: The Commission agrees that the proposed revision is needed, and the proposed revision was adopted.

Comment: Recommends specific changes to the mixing zone proposal, subsection 1(ii) criteria: “The concentration and duration of the discharge, bioaccumulation factors and exposure considerations for each BCC for which the mixing zone is sought to be continued, and for POTWs, whether the POTW collection system is a meaningful source of BCC loadings, or the BCC loadings originate in source waters or from other generic environmental sources.”

Response: Special treatment of POTWs was not under consideration for this triennial review, however the issue could be included in the next triennial review when the Commission requests initial public input into the review process.

Comment: Recommends the following addition to the section on variances: “Variances to the aquatic life criteria for ammonia may be granted by the permitting authority in the event of substantial adverse economic or social impact from the immediate application of the criteria. Such variances may incorporate a phase-in of new treatment technologies and alternate permitting parameters under Chapter 4 (Mixing Zones) and Sections 5.2 (Critical Flow) and 5.3 (Wastewater Discharges). The permittee shall submit an application to the permitting authority which includes...”

Response: This proposed revision was not adopted by the Commission. No changes to the section on variances were under consideration. In addition, the Commission would not include in its standards anything in regards to variances issued by the permitting authorities.

Comment: Regarding the mixing zone prohibition, asks ORSANCO to clarify its interpretation of “new discharges”. For example, does it include discharges in existence prior to October, 2003, but that since have expanded their discharge to include those from new FGD wastewater?

Response: The revised language states that mixing zones shall continue to be prohibited for BCCs for discharges that came into existence after Oct. 16, 2003, and that the addition of waste streams to an existing facility shall be evaluated under this section by the permitting authority at the time of permit review.

Comment: Points out that many facilities currently do not have mercury limits. Requests that existing facilities that receive new limits for mercury be allowed adequate time to use mixing zones until they can comply with new requirements. POTWs were not designed to remove mercury and therefore should not be subject to more stringent mercury regulations.

Response: The inclusion of effluent limits in NPDES permits is determined by the permitting authority, not ORSANCO.

Comment: There is no scientific basis for the use of mixing zones for BCCs.

Response: The revised standards require that mixing zones for existing discharges be eliminated as soon as practicable. The use of mixing zones for BCCs for new discharges remains banned.

Comment: If ORSANCO does retain the variance procedure, it must ensure sufficient safeguards are in place and justifications for continuing variances. ORSANCO must require milestones for progress on mercury minimization and demonstrated progress on reducing mercury. Variance holders should submit regular progress reports to ORSANCO including information on loadings, developments regarding mercury removal technologies, costs, and results of required annual water and fish monitoring programs. Variance holders should make defined payments to a fund for mercury research. ORSANCO should prepare an annual report on the status of all of its variance holders (specifics information listed).

Response: All ORSANCO variances for mixing zones for BCCs have been eliminated.

Comment: If the mixing zone ban is retained, recommends that ORSANCO make the determination of “as soon as practicable” in consultation with the state permitting authorities.

Response: The mixing zone revision includes criteria to assist the state in making the determination of “as soon as practicable.” In addition, while the revision transfers the decision-making process to the state, ORSANCO is always available to its member states for consultation.

Comment: Urges ORSANCO to give due weight to the Ohio River specific conditions and data that have been collected by ORSANCO and other organizations when making its decision about mixing zones. The decision to eliminate mixing zones in the Great Lakes was based on hydrologic conditions not present in the Ohio River.

Response: The Commission has appointed a committee to identify and develop the studies necessary to address the important questions regarding mercury in the Ohio River.

Comment: The standards should provide for a *de minimus* cutoff regarding the mixing zone prohibition (specific language offered). Valley Converting’s mercury discharge is less than 0.01 percent of the assimilative capacity of the river.

Response: The requirement to eliminate mixing zones for BCCs will be required of all discharges, regardless of size or current discharges, when the permitting authority determines it is practicable.

Comment: The Ohio River is not impaired for mercury, and as such, a blanket prohibition on mixing zones is unnecessary.

Response: While ORSANCO has not listed the Ohio River as impaired for mercury, certain states have listed the Ohio River as impaired for mercury based on exceedances of water and fish criteria for mercury.

Comment: If the mixing zone ban is retained, the current deadline should be extended to 2020 or later to allow ORSANCO adequate time to understand the science.

Response: The revision has removed the date certain and replaced it with “as soon as practicable” as determined by the permitting authority, which could potentially include dates of 2020 or later. In addition, the Commission has established a committee to begin addressing the science questions regarding mercury in the Ohio River.

Comment: Does not support the “as soon as practicable” deadline due to the increased uncertainties associated with such a deadline.

Response: While the “as soon as practicable” deadline may create uncertainty, it also provides the permitting authorities with the needed flexibility associated with this complex issue.

Comment: The mixing zone ban is not appropriate to the Ohio River. The Ohio River's hydrology is much different from the Great Lakes, which is what the mixing zone ban was originally promulgated to protect. In addition, the EPA stated that another reason was the mercury fish consumption advisories on the Great Lakes, whereas there is only one small segment of the Ohio River covered by a mercury fish consumption advisory.

Response: The entire Ohio River is covered by fish consumption advisories, a significant number of those related to mercury levels in fish. The Commission has established a committee to identify and develop mercury studies which may include addressing questions such as these.

Comment: Supports elimination of the October 2015 deadline and transferring responsibility to the permitting authority.

Response: The Commission agrees and has made this revision to the standards.

Comment: The authority to grant variances should lie with the state permitting authorities, not ORSANCO.

Response: The Commission agrees and the standards were revised in accordance with this proposal.

Comment: Supports the mixing zone proposal and the allowance of variances to the mixing zone prohibition.

Response: The mixing zone proposal was adopted and the allowance of variances has been maintained.

Mercury

Comment: Maintain the existing mercury standards until proposing a more stringent standard.

Response: The mercury standards were maintained.

Comment: General concern about mercury in the Ohio River.

Response: The revision to the mixing zone prohibition does not allow for greater amounts of mercury to be discharged than amounts discharged prior to the revision. In addition, ORSANCO continues routine monitoring for levels of mercury in Ohio River water and fish.

Comment: The water quality mercury criterion should be retained along with the "not to exceed" requirement. Changing the "not to exceed" requirement would constitute "backsliding" which is prohibited by the Clean Water Act.

Response: The mercury water quality criterion has been maintained.

Comment: ORSANCO should update the mercury criterion to be consistent with current science and USEPA which dropped its 0.012 ug/L criterion. If ORSANCO retains the mercury criterion, it should be applied as an annual average with an allowable exceedance frequency of once in three years.

Response: The water quality criterion for mercury has been maintained. ORSANCO is currently undertaking a study of mercury which may lead to a re-evaluation of the criterion in the future.

Comment: Mercury criteria should be applied as an annual average.

Response: ORSANCO currently has a study under way to evaluate the mercury criterion.

Comment: Address concerns around rising levels of mercury contamination.

Response: The Commission continues to monitor mercury levels in Ohio River water and fish and is currently considering the need for additional mercury studies.

Comment: Supports reassessment of the total mercury water quality standard, and in the meantime, the standard should be implemented as not to be exceeded more than once in three years.

Response: ORSANCO is currently undertaking studies that may lead to a reassessment of the mercury criterion. Implementation of the standards is undertaken by the permitting authorities.

Comment: Urges reassessment of the total mercury water quality criterion. It is not in line with USEPA's recommended criteria.

Response: ORSANCO is currently undertaking studies that may lead to a reassessment of the mercury criterion.

Comment: ORSANCO should follow USEPA's lead and remove the total mercury criterion of 0.012 ug/L.

Response: ORSANCO is currently undertaking studies which may lead to a reassessment of the criterion.

Comment: WV's fish tissue methylmercury criterion is 0.5 mg/kg based on EPA's recommended approach to develop regionally-appropriate criteria due to differences in fish consumption patterns. ORSANCO should make allowance for use of these regionally-appropriate criteria, or conduct its own fish consumption surveys.

Response: ORSANCO's standards do allow for alternative, site-specific criteria.

Comment: The original criterion of 0.012 ug/L was developed as a methylmercury criterion by the USEPA, but conservatively applied as a total mercury criterion.

Response: ORSANCO is currently conducting studies which may lead to a reevaluation of its mercury criterion.

Comment: Conduct studies to better understand air emissions and atmospheric deposition, and surface runoff from contaminated soils on Ohio River mercury levels. Complete pool-by-pool assessments for mercury similar to what was submitted by Mountain State Carbon in their variance application. Increase Ohio River water monitoring for mercury to better understand relationships with flow. Conduct studies to understand the fate of mercury in the Ohio River. Conduct studies to understand the methylation processes in the Ohio River.

Response: ORSANCO is conducting a number of mercury-related studies and has established a committee to identify and develop mercury studies to answer important questions such as these.

Comment: Continue ORSANCO's water and fish monitoring programs for mercury.

Response: ORSANCO is continuing its mercury monitoring programs.

Comment: ORSANCO needs to further study mercury before re-evaluating the criterion. Options in lieu of the mercury criterion include: 1) Framework whereby the fish tissue criterion is used to determine reasonable potential, and if RP is determined, then allow the permittee to develop site-specific criteria, or 2) Utilize the water and fish criteria, but allow the permittee to develop site-specific criteria using a methylmercury translator.

Response: The Commission agrees that further study is needed and has established a committee to identify and develop mercury studies that may lead to addressing questions such as these.

Comment: ORSANCO should re-evaluate its total mercury water quality criterion, as it appears to be more stringent than many of the states.

Response: The Commission's mercury criteria are more stringent than some states and less stringent than others. The Commission has established a committee to identify and develop mercury studies which may include addressing questions such as these.

Ammonia Criteria

Comment: The ammonia standards must support mussels and allow them to re-populate areas where they have been extirpated. Use only the new ammonia standard that will be more protective of mussels.

Response: The revised criteria require that, for purposes of determining the applicable water quality-based limitations on ammonia-nitrogen, unionid mussels shall be presumed to be present at all times in the Ohio River unless the applicant demonstrates to the satisfaction of the permitting authority and ORSANCO that mussels are absent.

Comment: Supports the new ammonia criteria, but only with the mussels present tables.

Response: The revised criteria require that, for purposes of determining the applicable water quality-based limitations on ammonia-nitrogen, unionid mussels shall be presumed to be present at all times in the Ohio River unless the applicant demonstrates to the satisfaction of the permitting authority and ORSANCO that mussels are absent.

Comment: ORSANCO should not adopt the federal ammonia criteria during this triennial review, as Oregon is currently the only state to do so. Instead, ORSANCO should compile additional information (specifics included with comment).

Response: The Commission adopted the revised criteria because it is believed that it is protective of mussels which are present in the Ohio River.

Comment: Regarding the ammonia proposal, a more holistic approach should be taken on nitrogen limits. Design and operation of POTWs for nutrients control is best accomplished with an overall goal rather than piecemeal with ammonia criteria.

Response: The Commission believes that the revised ammonia criteria are necessary for the protection of aquatic life.

Comment: Recommends that ORSANCO address the presence/absence of mussels before or in tandem with the adoption of the new ammonia criteria.

Response: ORSANCO is aware of a number of studies that show the widespread presence of mussels in the Ohio River. However, the revised criteria do allow the applicant to conduct a demonstration that mussels are absent and utilize the corresponding mussels absent tables in setting effluent limitations.

Comment: ORSANCO should adopt guidance for determining the presence/absence of mussels with regard to its proposed ammonia criteria.

Response: ORSANCO staff are available to provide guidance to permittees and permitting authorities regarding such studies, however a written document has not been developed by ORSANCO.

Specification of Frequency and Duration

Comment: Don't understand why ORSANCO would ask the public for input on the 130 individual standards (input on duration and frequency). Why is ORSANCO opening the door to weakening all water quality standards (request for public input on frequency/duration).

Response: The Commission was considering the inclusion of duration and frequency with its numeric criteria and wished to provide for public input during its consideration. The standards were revised to state that duration and frequency values, where not specified, shall be consistent with the design assumptions utilized in development of the criteria.

Comment: Regarding the specification of frequency and duration, ORSANCO should refer to EPA's National Recommended Water Quality Criteria.

Response: The standards were revised to state that duration and frequency values, where not specified, shall be consistent with the design assumptions utilized in development of the criteria.

Comment: Frequency and duration for human health criteria are effectively addressed through proper designation of design stream flow. The use of 7Q10 for human health non-carcinogens is incorrect. For criteria based on consumption of fish or fish and water, the correct design flow is 30Q5, and the harmonic mean for criteria exerting effects over lifetime or particularly long-term (EPA Technical Support Document for Water Quality-Based Toxics Control section 4.6.1).

Response: The standards were revised to state that duration and frequency values, where not specified, shall be consistent with the design assumptions utilized in development of the criteria. Additional revisions are being considered for the next standards review.

Comment: Regarding the request for input on frequency and duration, ORSANCO should allow adequate time for stakeholder input.

Response: The Commission did not adopt any specific duration/frequency values, but adopted a revision that, where not specified, duration and frequency values shall be consistent with the design assumptions utilized in development of the criteria. The Commission's Pollution Control Standards Committee has deferred consideration of specific duration/frequency values to the next triennial review in order to provide adequate time to consider the issue.

Comment: Regarding the request for input on duration and frequency, ORSANCO should undertake an effort to obtain further stakeholder input.

Response: The Commission believes that ample time was provided for stakeholder input, however specific duration and frequency values may be considered during the next triennial review.

Comment: Supports adoption of EPA's frequency & duration recommendations which include a one-hour average for acute aquatic life criteria and a four-day average for chronic aquatic life criteria. Both of these averages should not be exceeded more than once in three years.

Response: Language was included in the revision which provides guidance that where not specified, frequency and duration values consistent with the design assumptions in the USEPA's criteria documents shall be utilized.

Comment: Regarding the request for input on frequency and duration, ORSANCO should make it clear that the averaging periods used by the permitting authorities will control the issuance of NPDES permit limits.

Response: ORSANCO's standards are not indented to clarify permitting authorities' practices.

Temperature

Comment: ORSANCO should clarify its temperature criteria for aquatic life that it also applies inside and outside the mixing zone.

Response: The Commission agrees and the revision was made.

Comment: Regarding temperature criterion, recommends that ORSANCO define "any location where public access is possible."

Response: This definition was not included in the current revision but will be determined by the permitting authority when utilizing the criteria.

Comment: The 110 deg F temperature criterion is not appropriately set. In addition, the language should be revised such that the criterion applies at locations that could reasonably be accessed by recreational swimmers.

Response: The Commission believes the revised language adopted provides sufficient description to the permitting authority.

Reporting of Upsets and Bypasses

Comment: Why are POTWs excluded from the requirement to report upsets, bypasses and spills.

Response: The Commission made no revisions to this provision of the standards but has placed it on its agenda for the next triennial review.

Comment: Supports the proposed revisions regarding the notification of upsets and bypasses.

Response: The Commission has deferred this issue to the next triennial review in order to provide adequate time to consider the issue.

Comment: Opposed to the addition of "spills" to the list of notification requirements because it is duplicative of existing state and federal programs, and because "spills" are not defined by ORSANCO.

Response: ORSANCO has not included this proposal in its 2015 revision and will be considering it further during the 2018 review.

Comment: ORSANCO must define the term “spills” so it is clear what must be reported under the proposal.

Response: The Commission made no revisions with regard to this proposal and may reevaluate the issue during the next triennial review.

Comment: ORSANCO should define the criteria for reporting spills, which should exclude spills not reportable under federal requirements.

Response: The Commission made no revisions in regard to this proposal and may reevaluate it during the 2018 triennial review.

Total Dissolved Solids

Comment: Supports the clarification to the TDS criterion.

Response: The Commission agrees and the clarification was adopted.