

Preparing a Mercury Variance Application

You should use the following outline to organize your mercury variance application. The outline is based on the requirements of paragraph (D)(10) of rule 3745-33-07 of the Ohio Administrative Code. The rule requires that a mercury variance application include all of this information, otherwise it can not be approved.

As you prepare your application, use the **text in bold** as titles for individual sections of the application. Organizing your application and naming each section as shown in the outline will assist you in making sure that it includes all of the required information, and it will assist us in reviewing your application.

Each section of the application should include distinct information related to the section's title. For example, section III.C should include information on any current plans, strategies or programs that you have to reduce or eliminate known mercury sources that were listed in section III.B.

You should submit the completed mercury variance application either with your NPDES permit renewal application or accompanied by an application for modification of your NPDES permit, as appropriate.

Outline for Mercury Variance Application

Cover page

Attach a cover page that includes the following information:

Mercury Variance Application

Prepared for (Name of Applicant)

Ohio NPDES Permit Number _____ *

Prepared by (Name and Title)

Date

Revision Date(s) (if necessary)

I. Certification Statement

Include the following statement:

As an authorized representative for _____, I am applying to the Director of Ohio EPA for coverage under the mercury variance from the 30-day average water quality-based mercury limit in the above-referenced NPDES permit. I hereby certify that I intend to be subject to the mercury variance terms and conditions of paragraph (D)(10) of rule 3745-33-07 of the Ohio Administrative Code. To the best of my knowledge, my NPDES-permitted discharge from outfall _____ is currently able to achieve an annual average mercury effluent concentration of 12 ng/l, or I project that it will be able to achieve this annual average concentration within five years of the date that the variance is granted.

_____ (Signature and Date)

_____ (Print Name and Title)

II. Description of measures taken to date for mercury reduction or elimination projects

Identify any work you already have done to identify mercury sources, to identify or implement reduction measures, or to review existing information and literature.

III. Plan of study

A. Current influent and effluent mercury concentrations

Include a table of influent and effluent mercury concentrations for the most recent 24 – 36 months obtained using a low-level analytical method. If you do not have influent data because monitoring is not required by your NPDES permit, collect at least two samples using the same sampling protocol you use for effluent sampling. Have these samples tested using the same low-level mercury method that is used for your effluent.

B. Identification of all known mercury sources

For a municipal wastewater treatment plant, dentists, hospitals, schools and human excrement/domestic sewage are known sources of mercury common to many communities. If you are an industrial discharger, you should consider the type of industrial activity and processes at your facility. You may use existing information and literature to address this.

C. Description of current plans to reduce or eliminate known sources

Include information on mercury reduction activities already underway or planned to address the known mercury sources identified in “B”.

D. Preliminary identification of other potential mercury sources

For a municipal wastewater treatment plant, other potential sources of mercury include health and veterinary clinics, commercial and industrial facilities, sediment deposits in sewers and storm water. There may be others. Systematic collection system sampling can be used to identify other potential mercury sources. Both municipal wastewater plants and industrial dischargers may use existing information and literature to address this.

E. Proposed schedule for evaluating mercury sources

The length and detail of this schedule are going to be facility-specific. The schedule should be a time line for conducting the activities included in the plan of study. An example of a schedule for a small city is included following the outline.

F. Proposed schedule for identifying and evaluating potential reduction, elimination and prevention methods

The length and detail of this schedule are going to be facility-specific. The schedule should be a time line for conducting the activities included in the plan of study. An example of a schedule for a small city is included following the outline.

IV. An explanation of the permittee’s basis for concluding that there are no readily available means of complying with the water quality-based effluent limit (WQBEL) without construction of end-of-pipe controls

Include a discussion of mercury sources, the difficulty of eliminating them and the cost of installing end-of-pipe treatment. Information can be drawn from the text of the mercury variance rule.

V. Show that the variance requested complies with the antidegradation requirements of rule 3745-1-05 of the Ohio Administrative Code

Include a completed antidegradation addendum. Complete the addendum as follows:

Section A Provide all information. For “Project Name” enter “Mercury Variance Application”.

Section B If your current NPDES permit does not include effluent limits for mercury, there will not be an increase in loading, so mark the second selection and proceed to Section E.

If your current NPDES permit includes effluent limits for mercury, there will be an increase in loading, so mark the last selection and proceed to Sections C and E.

Section C Mark item 1 "Yes" since an exclusion applies for imposing limits that are based on a mercury variance.

For item 2.a, include a brief explanation that since the limits are going to be granted under a mercury variance, the exclusion at section (F)(2)(d) of the antidegradation rule applies if you are located in the Lake Erie basin. If you are in the Ohio River basin, the exclusion at section (D)(1)(g) applies.

For item 2.b, contact the Division of Surface Water Central Office NPDES Permit Unit for assistance in determining your monthly average variance-based limit. You can use the monthly average concentration limit they calculate and the corresponding mass load to complete this item.

Nothing is required for item 2.c.

Mark item 3 "No" because waivers don't apply.

Nothing is required for item 4.

Section D Nothing is required for this section.

Section E Complete this section.

Example of Proposed Schedule for Evaluating Sources Municipal Wastewater Treatment Plant

Year 1

January - June: Devise sewer system monitoring plan, conduct initial screening at several sites using Method 1631 low-level monitoring

January - June: Investigate potential sources of mercury at wastewater plant

January - June: Prioritize identified mercury sources and prepare questionnaires and other information that will be used in site visits/public education

July - December: Evaluate sewer system monitoring data, determine if additional monitoring is warranted. Identify any potential sources

July - December: Begin conducting site visits of known and potential mercury sources

July - December: Continue identifying potential mercury sources

Year 2

January - June: Conduct additional sewer system monitoring if warranted. Identify any potential sources.

January - June: Complete all site visits and compile list of all known sources

July - December: Evaluate sewer system monitoring and records from sewer maintenance and inspections to determine if any patterns or conclusions can be drawn regarding the possible sources of mercury-containing solid wastes found in the sewer system.

Year 3

January - June: Conduct site visits of potential sources.

July - December: Complete site visits of potential sources.

January - June: Evaluate sewer system monitoring data. Conduct additional monitoring if warranted. Identify any potential sources.

July - December: Evaluate sewer system monitoring data. Conduct additional monitoring if warranted. Identify any potential sources

Example of Proposed Schedule for Identifying and Evaluating Potential Reduction, Elimination and Prevention Methods - Municipal Wastewater Treatment Plant

Year 1

July - December: Conduct site visits to dentists. Distribute the following: a copy of the American Dental Association *Best Management Practices for Mercury Amalgam Waste (October 2007)*; a copy of the Ohio Dental Association's amalgam recycling information; the "Dentists" section from the *Wisconsin Mercury Source Book*.

July - December: Continue site visits of known sources using preliminary information to prioritize contacts. During visits, distribute available guidance from *Wisconsin Mercury Source Book* (extensive list of sectors) and the Ohio EPA Mercury Reduction web site (hospitals, schools, mercury collection and recycling). Encourage implementation of appropriate strategies for reduction, elimination, and prevention.

Conduct monitoring required by NPDES permit

Submit annual PMP progress report

Year 2

January - June: Continue site visits of known sources using preliminary information to prioritize contacts. During visits, distribute available guidance from *Wisconsin Mercury Source Book* (extensive list of sectors) and the Ohio EPA Mercury Reduction web site (hospitals, schools, mercury collection and recycling). Encourage implementation of appropriate strategies for reduction, elimination, and prevention.

March: Contact the local solid waste management district for information regarding household hazardous waste collection strategies and/or events, or any other activity which may be designed to collect mercury-containing solid wastes. Participate in public education for proper management of these wastes, including advertisement of any collections events.

July - December: Contact dentists to determine if any mercury reduction measures have been implemented. Document and compile information.

July - December: Complete site visits of known sources using preliminary information to prioritize contacts. During visits, distribute available guidance from *Wisconsin Mercury Source Book* (extensive list of sectors) and the Ohio EPA Mercury Reduction web site (hospitals, schools, mercury collection and recycling). Encourage implementation of appropriate strategies for reduction, elimination, and prevention.

Conduct monitoring required by NPDES permit

Submit annual PMP progress report

Year 3

January - December: Implement mercury reduction measures at wastewater plant

January - June: Begin visits of other potential sources that have been identified using preliminary information to prioritize contacts. During visits, distribute available guidance from *Wisconsin Mercury Source Book* (extensive list of sectors) and the Ohio EPA Mercury Reduction web site (hospitals, schools, mercury collection and recycling). Encourage implementation of appropriate strategies for reduction, elimination, and prevention

July - December: Complete visits of other potential sources that have been identified using preliminary information to prioritize contacts. During visits, distribute available guidance from *Wisconsin Mercury Source Book* (extensive list of sectors) and the Ohio EPA Mercury Reduction web site (hospitals, schools, mercury collection and recycling). Encourage implementation of appropriate strategies for reduction, elimination, and prevention

July - December: Contact dentists and compile information on any mercury reduction measures that have been implemented. Document and compile information.

July - December: Contact other known sources to determine if any mercury reduction measures have been implemented. Document and compile information.

Conduct monitoring required by NPDES permit

Submit annual PMP progress report

Year 4 and annually

Continue annual contacts with dentists to determine if any mercury reduction measures have been implemented. Document and compile information.

Continue annual contacts with other known sources to determine if any mercury reduction measures have been implemented. Document and compile information.

Conduct monitoring required by NPDES permit

Submit annual PMP progress report