|  |  |
| --- | --- |
| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | MPCA Mercury Risk  Estimation Method (MMREM) form  AERA-27  Air Emissions Risk Analysis (AERA)  *Doc Type: Air Emissions Risk Assessment – External Documentation* |

**Purpose:** This form is required for AERAs that include a MMREM analysis. Consult the Minnesota Pollution Control Agency’s (MPCA) AERA guidance for instructions on completing this form. The AERA guidance can be found on the MPCA’s AERA website at <https://www.pca.state.mn.us/business-with-us/air-emissions-risk-analysis-aera>. Also consult the MMREM guidance at <https://www.pca.state.mn.us/sites/default/files/aq9-16.pdf> (found on the MPCA’s AERA website at <https://www.pca.state.mn.us/business-with-us/air-emissions-risk-analysis-aera>), and MPCA’s Air quality modeling website at <https://www.pca.state.mn.us/business-with-us/air-quality-modeling> when filling out this form.

**Instructions:** Check appropriate boxes below by clicking on them. Response areas may be expanded as needed. All AERA documents must be submitted electronically (email or through e-Services) Spreadsheets should not be submitted in PDF format. The AERA will be deemed incomplete if all requested forms and support documents are not included.

|  |  |  |
| --- | --- | --- |
| This form is being submitted as part of a: | Submittal date (mm/dd/yyyy) |  |
| MMREM-based analysis protocol |  |  |
| Explanation of MMREM-based analysis results |  |  |
| \*If applicable, explain any differences in methodologies between the approved protocol and the modeled results: | | |

Facility information

|  |  |  |  |
| --- | --- | --- | --- |
| Facility name: |  | TEMPO AI number: |  |

General submittal information

|  |
| --- |
| Are the MMREM guidance at <https://www.pca.state.mn.us/sites/default/files/aq9-16.pdf> and MPCA modeling guidance followed?  Yes  No  If no, describe deviations from the recommended guidance: |

MMREM spreadsheet inputs

|  |  |
| --- | --- |
| 1. | What source of information is used for mercury speciation? |
|  | EPA’s National Emission Inventory Hg speciation factors. What year (e.g., 2005):  Stack testing, if so provide a copy of the test results or indicate the facility and year if in Minnesota:  Control efficiencies. Explain:  Other. Explain: |
| 2. | Which of the following modeling methods are used in calculating the mercury air concentrations over the water body and watershed?  The same unitized emissions modeling used in other parts of the AERA.  MMREM specific AERMOD modeling. Explain:  Other. Explain: |

|  |  |
| --- | --- |
| 3. | Which water bodies are analyzed? Include Minnesota Department of Natural Resources (DNR) lake numbers, if available. Provide rationale for water body selection. |
|  | ***Note****: That any fishable water body occurring at the area of maximum deposition needs to be evaluated. If the area of maximum deposition does not fall on a fishable waterbody, consider all water bodies in the specified range around the facilityto determine which water body is nearest the area of maximum deposition. This may be the water body to evaluate for worst-case impacts at the screening level. However, it may not be clear whether the water body nearest the site of maximum deposition is the water body that is most highly impacted. There may be a water body with more impact because it has less dilution from its watershed, and more fishing. If it is not clear which water bodies need to be evaluated, MPCA staff need to be contacted.* |
| 4. | What is the source of the watershed information (e.g., DNR catchment tool, Total Maximum Daily Load [TMDL] report, DNR Lakefinder, MPCA map)? |
| 5. | Which existing ambient fish tissue concentration(s) are used:  *(Note that MPCA risk assessors can provide Minnesota specific fish tissue data and/or fish tissue data from U. S. Environmental Protection Agency’s (EPA) 2002-2006 National Fish Survey.)*  File name/s or description: |
|  | Which fish species: |
|  | How is the fish tissue concentration estimated (if not described above)? |