



**Minnesota Pollution  
Control Agency**

520 Lafayette Road North  
St. Paul, MN 55155-4194

# AERA-01

## Deliverable Checklist Air Emissions Risk Analysis (AERA)

Doc Type: Air Emissions Risk Assessment – External Documentation

### Instructions on Page 5

**Purpose:** This form serves as a checklist for submitting all necessary AERA materials prior to submitting an air permit application (pre-app) or with an air permit application (post-app). This form also documents the Minnesota Pollution Control Agency (MPCA) AERA completeness review. ***MPCA staff will fill out areas in italics during their review, indicating deficiencies and advising the applicant on how they can be remedied.*** Instructions on how to fill out this form are at the end of the form. For more information on the AERA process see the “AERA Guidance” on the MPCA website at <http://www.pca.state.mn.us/ktqh42a>. All AERA documents must be submitted electronically whether submitted with an air permit application or alone. AERA documents submitted with an air permit application must also be submitted in hard copy. An AERA submitted with an air permit application is not considered “substantially complete” until **all** necessary quantitative and qualitative information has been submitted, and MPCA staff have determined that appropriate methods have been used. **Submitting AERA materials for review prior to submitting an air permit application is highly recommended** so that site specific suggestions from MPCA staff can be included in AERA materials submitted with an air permit application.

### Facility Information

1. AQ Facility ID No.: \_\_\_\_\_
2. SIC Code: \_\_\_\_\_
3. Date(s) of pre-application submittal: \_\_\_\_\_  
(mm/dd/yyyy)
4. Date(s) of permit application submittal: \_\_\_\_\_  
(mm/dd/yyyy)
5. Facility name: \_\_\_\_\_
6. Facility location  
Street address: \_\_\_\_\_  
City: \_\_\_\_\_ State: MN Zip code: \_\_\_\_\_ County: \_\_\_\_\_
7. Proposer: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_
8. AERA Preparer: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Are there differences between the AERA materials submitted pre-app and those submitted post-app? ☐ Yes ☐ No ☐ NA  
If yes, please explain the differences:

**MPCA review question:** *Are there differences between the AERA materials submitted pre-app and those submitted post-app?*  
☐ Yes ☐ No ☐ NA *If yes, please explain the differences:*

### Summary of What the AERA Supports (Mark all that apply)

Is this a pre-application submittal? ☐ Yes ☐ No

- ☐ An air permit application.
- ☐ Compliance with an existing permit requirement.
- ☐ A mandatory Environmental Impact Statement (EIS), required by Minn. R. 4410.4400. Please indicate which subpart was met: \_\_\_\_\_
- ☐ A voluntary or discretionary EIS. If the AERA was requested by the MPCA, please indicate the request date (mm/dd/yyyy): \_\_\_\_\_
- ☐ A mandatory Environmental Assessment Worksheet (EAW), required by Minn. R. 4410.4300 subpart 15 (air emissions trigger) or subpart 5 (fuel conversion trigger).
- ☐ A mandatory Environmental Assessment Worksheet (EAW) required by a subpart of Minn. R. 4410.4300 other than 15 or 5. Please indicate which subpart was met: \_\_\_\_\_
- If the AERA was requested by the MPCA please indicate the request date (mm/dd/yyyy): \_\_\_\_\_
- ☐ A voluntary or discretionary EAW. If the AERA was requested by the MPCA, please indicate the request date (mm/dd/yyyy): \_\_\_\_\_
- ☐ Pre-authorized change to a facility with a “flexible air permit”, where a facility owner is seeking to increase toxic emissions, which may be allowed to be changed without additional permitting.
- ☐ Other: Please explain: \_\_\_\_\_

## MPCA Overall Summary of AERA Review

Names of MPCA AERA reviewer(s): \_\_\_\_\_

Submittal date (mm/dd/yyyy)	Pre-app review date (mm/dd/yyyy)	Overall pre-app AERA submittal determination (Select Yes for adequate, No for deficient, and enter reviewer's initials)	Post-app completeness review date (mm/dd/yyyy)	Overall post-app AERA submittal completeness determination (Select Yes for substantially complete, No for incomplete, and enter reviewer's initials)
		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

**MPCA overall pre-app review notes including comments on deficiencies and how they can be remedied:**

**MPCA overall post-app review notes including comments on deficiencies and how they can be remedied:**

The proposer/AERA preparer should fill out the first three columns in the following tables. *In the italicized columns, MPCA staff will mark **pre-app sections** with “Yes” for adequate, “No” for deficient, and enter their initials; and will mark **post-app sections** with “Yes” for substantially complete, “No” for incomplete, and enter their initials.*

### Required AERA Forms

Submitted	Submittal date(s) (mm/dd/yyyy)	AERA forms are located at <a href="http://www.pca.state.mn.us/gp0r42f">http://www.pca.state.mn.us/gp0r42f</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>AERA-01</b> Deliverable Checklist (this form)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>AERA-02</b> Qualitative Information Checklist		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>AERA-03</b> Air Dispersion Modeling Analysis Form		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>AERA-04</b> Emergency Internal Combustion Engine Certification (if applicable)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>AERA-05</b> Emissions Form		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>AERA-13</b> Determination Checklist for Proposed Ethanol Facilities (if applicable)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>AERA-19</b> Cumulative Air Emissions Risk Analysis Form (NA only if no environmental review is being done)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>AERA-24</b> AERA Certification		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>*AERA-26</b> Refined HHRAP-based Analysis Form (if applicable)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>*AERA-27</b> MPCA Mercury Risk Estimation Method (MMREM) Protocol Form (if applicable)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

**\*\*For an AERA with a refined analysis based on EPA's Human Health Risk Assessment Protocol (HHRAP) or an analysis using the MPCA Mercury Risk Estimation Method (MMREM) a MPCA protocol (AERA-26 form or AERA-27 form) and the other forms must be submitted pre-app.**

## Required Permit Forms

When the above AERA forms are submitted electronically please submit electronic versions of the following permitting forms with them.

Submitted	Submittal date(s) (mm/dd/yyyy)	Permit forms are located at <a href="http://www.pca.state.mn.us/s/nwqh472">http://www.pca.state.mn.us/s/nwqh472</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy determination	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>GI-01:</b> Facility Information		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>GI-02:</b> Process Flow Diagram		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>GI-03:</b> Facility and Stack/Vent Diagram		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>GI-04:</b> Stack/Vent Information		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>GI-05D:</b> Fugitive Emission Source Information (if applicable)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		<b>MI-01:</b> Building and Structure Information		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		<b>HG-01:</b> Mercury Releases to Ambient Air (NA if Hg PTE is less than 1 lb/year)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

## Required Supporting Submittals

### AERA emissions

Submitted	Submittal date(s) (mm/dd/yyyy)	An example spreadsheet is at <a href="http://www.pca.state.mn.us/index.php/view-document.html?gid=140">http://www.pca.state.mn.us/index.php/view-document.html?gid=140</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Emissions calculations in Excel spreadsheet named: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

### Mercury (Hg) submittals – ☐ NA - if facility mercury PTE emissions are less than 1 lb/yr

Submitted	Submittal date(s) (mm/dd/yyyy)	Mercury forms are at <a href="http://www.pca.state.mn.us/yhiz431">http://www.pca.state.mn.us/yhiz431</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		MMREM spreadsheet(s)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Spreadsheet with fish tissue concentration calculations		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Spreadsheet or modeling file showing MMREM Hg air concentration calculations		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

## AERA dispersion modeling

Submitted	Submittal date(s) (mm/dd/yyyy)	Dispersion modeling guidance is at <a href="http://www.pca.state.mn.us/jsr/j427">http://www.pca.state.mn.us/jsr/j427</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic (optional) <input type="checkbox"/> Hard copy		SAM spreadsheet (optional)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Base maps (e.g., aerial photos, digital raster graphs, CAD files, etc.)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Dispersion modeling input/output files and required support files (check all that apply)  <input type="checkbox"/> DISPERSE summary report and summary <input type="checkbox"/> AERMOD input/output files with unitized emission rates for RASS <input type="checkbox"/> AERMOD input/output files with Q/CHI <input type="checkbox"/> AERMOD input/output files for HHRAP based risk modeling		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Map or Plot files (check all that apply)  <input type="checkbox"/> Showing the dispersion of unitized emissions from AERMOD for RASS <input type="checkbox"/> Showing Q/CHI risks from AERMOD <input type="checkbox"/> Showing rationale for HHRAP-based analysis receptor location <input type="checkbox"/> Showing HHRAP-based analysis risks		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Remainder of files indicated on AERA-form 03 (e.g. meteorological data files, BPIP, AERMAP)		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

## Required Supporting Risk Submittals

### Qualitative information

Submitted	Submittal date(s) (mm/dd/yyyy)	Documents	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Maps indicated in AERA-form 02		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy <input type="checkbox"/> NA		Additional documents indicated in AERA-form 02		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

### Risk results for the entire facility as proposed (check one)

Submitted	Submittal date(s) (mm/dd/yyyy)	RASS and Q/CHI spreadsheets are at <a href="http://www.pca.state.mn.us/zihy434">http://www.pca.state.mn.us/zihy434</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		RASS spreadsheet(s) including all emitted chemicals		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Q/CHI spreadsheet including all emitted chemicals		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		HHRAP-based analysis files that include all emitted chemicals		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Q/CHI spreadsheet with select chemicals and a RASS that includes chemicals screened out		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		HHRAP-based analysis files with select chemicals and a RASS that includes chemicals screened out		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

### Risk results for entire pre-existing facility (check one)

Submitted	Submittal date(s) (mm/dd/yyyy)	RASS and Q/CHI spreadsheets are at <a href="http://www.pca.state.mn.us/zihy434">http://www.pca.state.mn.us/zihy434</a>	Pre-app review date(s) (mm/dd/yyyy)	Pre-app adequacy	Post-app review date(s) (mm/dd/yyyy)	Post-app completeness
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		RASS spreadsheet(s) including all emitted chemicals		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Q/CHI spreadsheet including all emitted chemicals		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		HHRAP-based analysis, files that include all emitted chemicals.		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		Q/CHI spreadsheet with select chemicals and a RASS that includes chemicals screened out		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____
<input type="checkbox"/> Electronic <input type="checkbox"/> Hard copy		HHRAP-based analysis files with select chemicals and a RASS that includes chemicals screened out		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____		<input type="checkbox"/> Yes <input type="checkbox"/> No Init: _____

### Additional Information In the table below, please describe any additional attachments

Attachment reference number (or other identifier)	Title	Purpose/Description

### Proposer/Preparer Instructions

Boxes can be checked by clicking on them. Response areas will expand as necessary to include the complete response. Multiple dates can be added by using the "Enter key" (return key) after you type the first date. All Air Emission Risk Analysis (AERA) documents must be submitted electronically whether submitted with an air permit application or alone. AERA documents submitted with an air permit application must also be submitted in a hard copy. Hard copies of spreadsheets, like the Risk Assessment Screening Spreadsheet (RASS) and lengthy modeling files should include the first summary page of the document but do not need to include subsequent pages since the electronic version will be available for review.

If **all** of the requested forms and support documents **are not included** with an air permit application needing an AERA the air permit application **will be deemed incomplete**. This includes risk estimates for pre-existing facilities. MPCA staff will return this AERA form plus any other incomplete AERA forms to the applicant with deficiencies and remedies indicated in the *italicized* MPCA review areas. If forms were submitted pre-app they should be updated and re-submitted post-app with any *italicized* MPCA comments left in and changes summarized in the appropriate areas.

**Facility information:** Fill in the Air Quality (AQ) Facility identification (ID) No. (Number), which is the first eight digits of the permit number for all new permits issued under the new operating permit program, Standard Industrial Classification (SIC) code, facility name and location, and submittal dates. The project proposer and AERA preparer should be people that MPCA staff can contact with general and technical questions about the AERA submittal.

**AERA forms:** Instructions accompany each of the AERA forms. Contact MPCA for further clarification.

**MPCA air permit forms:** Instructions for completing these forms may be found on MPCA's website. Contact the MPCA for further clarification.

**Additional information:** These forms are designed to include all of the essential information for an AERA, replacing the need for a separate report. If the applicant feels that additional information is necessary to further describe the facility, the processes, the method of generating emissions estimates, the assumptions used in generating dispersion factors or risk estimates, etc. this information can be attached to the AERA forms with the reference, title, and purpose/description indicated in the additional information section of this form.

## **MPCA Review Instructions**

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### **Specific forms/support documents**

MPCA staff will summarize their review of specific forms/support documents by marking either "Yes" for adequate or "No" for deficient in the pre-app sections, or "Yes" for substantially complete or "No" for incomplete in the post-app sections, along with their initials. They will add comments on deficiencies and how they can be remedied in the summary section. When there are multiple submittals, include each new submittal date in the table with the corresponding review dates and comments, thus keeping a log of submittals.

### **Overall adequacy/completeness summary**

This form should summarize the results of the reviews conducted in other sections and on other forms. If **all** of the necessary forms/documents are present and follow the appropriate methods (i.e., follows the AERA, emissions and modeling guidance) MPCA staff will mark the appropriate overall summary section with either "Yes" for adequate in the pre-app section, or "Yes" for substantially complete in the post-app section. Otherwise they will mark "No" for deficient in the pre-app AERA submittal determination section or "No" for incomplete in the post-app AERA determination section. They will add comments on deficiencies and how they can be remedied in the overall summary section. If this form is being submitted as a protocol indicate in the MPCA overall review notes whether the protocol is approved or has deficiencies. Remember an AERA submitted with an air permit application is not considered "substantially complete" until **all** necessary quantitative and qualitative information has been submitted, **and MPCA staff have determined that appropriate methods have been used**. Post-app results from this form and any other forms showing deficiencies should be shared with the permit engineer conducting the permit application completeness review who will then share it with the applicant.