



Air Emissions Risk Analysis (AERA)

The Air Emission Risk Analysis (AERA) process involves conducting risk analyses for certain facilities and their related air emission sources. The cumulative air emissions process looks at facilities and their related air emission sources and existing air related health risks in the area. The Minnesota Pollution Control Agency (MPCA) intends for these processes to streamline review of facility permits and improve resource use for both businesses and the Agency. The AERA process identifies those sources, source groups, chemicals and associated exposure pathways that do not appear to pose unacceptable risks or hazards to the public as a result of their emissions, as well as those that should be subjected to further scrutiny and possible control by virtue of their potential to cause significant effects.

The AERA guidance, its appendices and other materials related to the process are interim final drafts, meaning that, while these documents are considered final as of the version date, the MPCA will complete future revisions as necessary to improve the risk analysis process. The MPCA will update the chemical list and other AERA documents periodically in an effort to incorporate new scientific information.

Updates will be dated and posted on the MPCA's AERA home page. The latest version of AERA materials, found on this website, should be used at the beginning of each new project.

Who Needs an AERA?

- Industrial facilities going through the environmental review process because the proposed project meets the threshold for an Environmental Assessment Worksheet (Minn. R. 4410.4300, subp. 15.) or an Environmental Impact Statement (Minn. R. 4410.4400) and construction of the project increases air emissions of a single criteria pollutant by 250 tons per year or more after the use of control equipment.
- The MPCA may also direct a project proposer or facility owner to conduct an AERA when:
 - Substantive comments are received during a public comment period for an air emissions facility permit that might be resolved through the AERA process. In this instance, the permit may be issued containing the requirement to conduct the analysis, rather than delaying permit issuance until an AERA is completed;
 - The permittee is applying for a "flexible air permit" where a facility owner is seeking pre-authorized changes to a facility such that toxic emissions may be allowed to change without additional permitting;
 - At the MPCA's discretion: an existing air emission source is the subject of significant public interest, or the specifics of a new facility or existing facility expansion indicate a need for further analysis prior to public notice. Some of the factors that may be considered in evaluating the need for an AERA include the location of the facility, the types of receptors nearby and their distance from the facility, the type of facility and/or change, and the amount and types of emissions from the facility.

What's New:

In March 2012, in order to use the most up to date toxicity information, the RASS was updated using EPA's Peer Reviewed Toxicity Values (PPRTV's) instead of EPA's Health Effects Assessment Summary Tables (HEAST) values.

In August 2011 the AERA Forms were updated to reflect procedural changes. See [Forms and Deliverables – AERA](#) for more details.

Guidance on "Who Needs an AERA?" has been changed. The default threshold for industrial facilities has been changed to coincide with environmental review program. The MPCA will continue to use its discretion in requesting proposers conduct an AERA for projects outside of this default. See full explanation below in "[Who Needs an AERA.](#)"

New information can be found on the [Multi-pathway Risk Analysis](#) Web page to guide in the estimation of potential human health risks using central tendency estimates for human exposure assumptions.

Guidance for conducting Cumulative Air Emissions Risk Analyses is now available on the [Cumulative Air Emissions Risk Analysis](#) webpage.

A new study published by the MPCA on Multi-pathway Screening Factors, or multimedia factors, is now

The AERA Process

An AERA includes both a quantitative and a qualitative facility review. Before beginning the process, MPCA recommends that project proposers review the guide to learn its intended purpose and its limitations.

An AERA can be used as an iterative screening process to inform whether more refined analysis is appropriate. Staff with relevant expertise and MPCA section managers will provide guidance for conducting a refined analysis. Listed below are four possible courses of action that could result from the AERA process:



1. further refined and focused risk assessment of the issues identified through the screening process;
2. no further analysis (project proposer can complete the environmental review and/or permitting process);
3. consideration of implementing additional pollution prevention and/or mitigative measures to reduce or better disperse emissions; or
4. recommend that the issue of risk be evaluated within an environmental impact statement, if AERA is part of Environmental Review.

Consider notifying local residents and community members about your project. Early communication efforts are useful in establishing a good relationship with neighbors and knowing community concerns in advance of the public notice period.




Who to Contact

For additional information or for clarification of the AERA process, please contact MPCA risk assessment staff.

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Environmental Review

available on the [Multi-pathway Risk Analysis](#) Web page. The study updates multimedia factors found in the Risk Assessment Screening Spreadsheet and Q/CHI spreadsheet.

A list of pollutants rated E in AP-42 no longer need to be quantified for natural gas boilers. See [AERA Guidance Updates](#) for a list of those pollutants.

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For questions and comments on the content of the AERA Web pages, contact Heather.Magee-Hill@state.mn.us.

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