



Form No.	A-L-0094
Effective Date	6/4/2024
Revision No.	02
Last Revision Date	8/9/2022
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Guidance Document for Qualitative Ambient Impact Screening Analyses (QAISA)

The Maine Department of Environmental Protection (Department) has developed this guidance document to outline when and how to submit a qualitative ambient impact screening analysis (QAISA) as a means to assure protection of ambient air quality standards (AAQS).

Applicability

The Department's regulation *Stationary Generators*, 06-096 C.M.R. ch. 169, (Chapter 169) addresses air emissions from new stationary generators. It applies to all stationary generators installed after October 9, 2022, and contains both emission standards and stack height requirements. For generators powered by engines with a rated output greater than 1,000 brake horsepower (747 kilowatts), Chapter 169 contains several compliance options for both the emissions standards and the stack height requirements, one of which is providing a QAISA to demonstrate to the Department's satisfaction that emissions from the generator's engine are not likely to cause or contribute to violations of AAQS.

Conducting a QAISA

When choosing to utilize a QAISA, the applicant must submit this analysis as part of the application packet for a new or amended air emission license when licensing for the first time a generator subject to Chapter 169.

A QAISA used to satisfy either the emissions standards or stack height requirements of Chapter 169 is an analysis provided by the applicant that does the following:

- Proposes emission standards and a stack height for the generator;
- Proposes any additional operational limits (e.g., limits on hours of operation) or other work practice standards that will be used to minimize emissions and their impact;
- Discusses the facts specific to the proposed project, location, and facility; and
- Makes a conclusion that demonstrates how the proposed emission standards, stack height, operational limits, and/or work practice standards are appropriate and protective of AAQS.

Some of the project-specific items that the analysis should consider include, but are not limited to, the following:

- Pollutant emission rates (e.g., engine's certified tier level);
- Stack parameters (location, height, diameter, presence of rain cap);
- Stack orientation (vertical or horizontal);
- Exhaust velocity and temperature;
- Dimensions of nearby structures, including a scaled plot plan of these structures;
- Distance to sensitive receptors (e.g., schools, nursing homes, hospitals, etc.);



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- Location relative to places the public may be for extended periods, such as residences, offices, parks, etc.;
- Local terrain features; and
- Proposed operational limits (e.g., limits on hours of operation) or other work practice standards used to minimize emissions and their impact.

Other supplementary information may be required as part of the analysis to support the proposed conclusion. The QAISA must include the basis of the applicant's justification and conclusions as to why the proposed project is not expected to cause or contribute to violations of AAQS.

Compliance Strategies

Based on the Department's experience, the following attributes are protective of AAQS and are likely to be approvable as a QAISA provided all of the following are true for the generator:

- It is an emergency generator that is not used for peak shaving or demand response activities.
- It has a licensed operating limit of 500 hours/year or less for both emergency and non-emergency operation combined.
- The engine is operated according to the manufacturer's written maintenance and operation instructions.
- The stack is vertical, has no fixed rain cap, and exhausts above the roofline of the building the generator is in/on and any nearby controlling structures.
- It is located a reasonable distance from the nearest occupied building not under control of the facility, publicly accessible area, or sensitive receptor, combined with other mitigating factors such as terrain features and prevailing winds.

A QAISA remains a case-by-case analysis, but the attributes listed above typically offer strong evidence that favors its approval. Other strong attributes the Department encourages the applicant to consider are generators that fire natural gas or propane and those with engines that fire distillate fuel certified to EPA's Tier 4 standards.

Department's Decision

After review of the QAISA submitted by the applicant, the Department will make a finding as to whether the analysis is sufficient to assure protection of AAQS. In its review, the Department will consider the information provided by the applicant as well as any other relevant information such as other nearby emissions sources. Agreement with the applicant's conclusion is not guaranteed and is solely at the discretion of the Department and based on the Department's experience with similar sources.

Additional Resources

A copy of this document is available electronically at the following Maine DEP website:

<http://www.maine.gov/dep/air/publications/index.html>

For more information or assistance, please contact a Maine DEP Air Licensing staff member or email us at DEP-Air-Licensing-Help@maine.gov.