

EMERGENCY GENERATOR DATA SHEET

The following information should be included to expedite the processing of the application for a Certificate of Approval. If more than one emergency generator is being applied for, please fill out one of these data sheets for each emergency generator or include the information contained below in a summary table.

1. Please provide a brief description of the intended use of the emergency generator.
2. Where will the generator be located? (e.g., indoors, outdoors in enclosure)
3. Identify the fuel being used. (e.g., diesel oil, natural gas, etc.)
4. What is the unit rated for? (in kW)
5. If the height of the exhaust stack is more than twice the height of the building/enclosure, then the exhaust flowrate (actual m³/s) and temperature (°C) are required.
6. Please provide the stack exit diameter. (in metres)
7. Please provide the stack height above the roof (in metres).
8. Please provide the stack height above grade (in metres).
9. If the generator is located indoors, please provide the following:
 - building dimensions (including dimensions of all buildings within 5 metres of main building);
 - building elevation(s);
 - location of exhaust stack;
 - location of property line.

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10. If the generator is located outdoors in an enclosure, please provide the following :
 - enclosure dimensions (length, width, height);
 - if the enclosure is within 5 metres of any other structures, include the dimensions of that structure as well;
 - location of exhaust stack;
 - location of property line.
11. Please provide the distance from the ventilation openings for combustion air intake/exhaust or the combustion exhaust stack (whichever is closer) to the nearest residential property line (if residences are located on-site, then provide distance to nearest residential receptor).
12. If there are any sensitive receptors (i.e., hospital, school, nursing home, day care centre) within 500 metres of the exhaust stack, please provide details of their location.
13. Please provide exhaust emission information, if available. Include equipment data sheet, if available.
14. If there are any other sources of nitrogen oxides emissions (i.e., existing generators or other pieces of combustion equipment) on-site please refer to "Procedure For Preparing An Emission Summary And Dispersion Modelling Report, June 1998" and provide the emission summary and stack information for these sources as well.

**INFORMATION FOR PROPONENTS
APPLYING FOR A CERTIFICATE OF APPROVAL (AIR)
FOR AN EMERGENCY GENERATOR**

Section 9 of the Environmental Protection Act, R.S.O. 1990 (Act) requires that anyone who constructs, alters, replaces or extends anything that may discharge a contaminant to the natural environment, other than water, is required to obtain a Certificate of Approval from the Director before the construction, alteration, replacement or extension takes place. As a result, no person may install and operate equipment, such as an emergency generator, that discharge to atmosphere without first obtaining a Certificate of Approval. Detailed information on approval requirements and procedures are contained in a separate document entitled "Guide for Applying for Approval (Air), Section 9, Environmental Protection Act, R.S.O. 1990, Environmental Assessment and Approvals Branch, January 2000". This document is available on the Ministry of Environment's web site (www.ene.gov.on.ca) or can be obtained by contacting Client Services at (416) 314-8001.

EMISSIONS and CRITERIA FOR APPROVAL - EMERGENCY GENERATOR

Due to the unique nature of emergency generators, the Approvals Branch has developed a separate method for evaluating these pieces of equipment. Please take the time to review this information sheet and the attached data sheet prior to submitting your application for a Certificate of Approval (Air).

The major contaminants emitted to atmosphere from an emergency generator are nitrogen oxides. The point of impingement limit for nitrogen oxides is 500 micrograms per cubic metre - maximum ½-hour average. However, for a generator used for emergency use only, the Approvals Branch has adopted an approvals screening level of 1880 micrograms per cubic metre - maximum ½-hour average at non-sensitive receptors. In the event of a sensitive receptor (e.g., hospital, school, nursing home, day care centre), the less stringent approvals screening level no longer applies and the proponent must comply with the 500 micrograms per cubic metre limit.

The Approvals Branch has developed an internal screening procedure for determining which emergency generators require detailed noise assessments. Emergency generators located indoors require a noise assessment when the ventilation openings for combustion air intake/exhaust or the combustion exhaust stack are 20 metres or less from the nearest residential property line. Emergency generators located outdoors in an enclosure require a noise assessment when the ventilation openings for combustion air intake/exhaust or the combustion exhaust stack are 60 metres or less from the nearest residential property line. In both cases, if the residences are located on-site then the distance is measured from the ventilation openings for combustion air intake/exhaust or the combustion exhaust stack to the nearest residential receptor on-site. If a detailed noise assessment is required, please refer to the Mandatory Noise Information Request Form for Diesel/Gas Generator Sets.

If the ventilation openings for combustion air intake/exhaust or the combustion exhaust stack are less than 100 metres but do not fall into the range requiring a detailed noise assessment, the certificate will be issued for the emergency generator set with a general requirement for compliance with noise limits set out in the Ministry Publication NPC-205. Please note that in order to achieve compliance, it is necessary to have appropriate silencing equipment and materials installed. The following minimum recommendations for noise abatement measures should be adequate for a majority of installations:

- Acoustical treatment of the cooling air intake and exhaust openings (facing the receptor within $\pm 90^\circ$ angle from the axis of each opening) in the mechanical room housing the diesel generator set, capable of providing the following values of Insertion-Loss in 1/1 octave frequency bands:

Centre Frequency (Hertz)	125	250	500	1000	2000	4000
Insertion-Loss (decibels)	10	12	14	15	15	15 ;

- Engine combustion exhaust muffler for the diesel generator set, capable of providing the following values of Insertion-Loss in 1/1 octave frequency bands:

Centre Frequency (Hertz)	125	250	500	1000	2000	4000
Insertion-Loss (decibels)	23	29	30	28	22	21

and;

- External doors in the mechanical room housing the diesel generator-set made of at least 50 millimetres thick solid slab wood or steel skin with glass fibre insulated core, set in a door jamb fitted with dual solid neoprene gaskets on perimeter, capable of providing a minimum Sound Transmission Class of STC35.

We emphasize that it is the applicant's responsibility to provide adequate noise abatement measures to ensure compliance. Please note that some installations may require more effective noise abatement measures than the above minimum recommendations.

INFORMATION REQUIREMENTS - APPLICATIONS FOR EMERGENCY GENERATORS

The Emergency Generator Data Sheet identifies the necessary information that is required by the Ministry to assess an application for Certificate of Approval(air). The inclusion of all on-site sources of nitrogen oxides emissions is of particular importance for verifying compliance with the point of impingement limits. A scaled site plan, including elevations and surrounding land usage, is also important to facilitate the conversion of emission estimates to a predicted point of impingement impact for subsequent comparison to the point of impingement limits administered by Ontario Regulation 346 - General Air Pollution.

If you need a copy of Publication NPC-205, please call the Ministry's Public Information Centre at (416) 325-4000 or toll free at 1-800-565-4923. If you have any questions regarding the approvals process, please feel free to contact our Client Services representatives at (416) 314-8001.