



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

INTRODUCTION:

If you own and/or operate a new or existing incinerator, you must obtain an air quality operating permit for the incinerator unless it is exempt as discussed below. You can obtain a General Incinerator Operating Permit that is specifically for your incinerator or your incinerator can be included in an operating permit issued for all emission units at a source (defined below). The general permit is typically used by sources that only have one emission unit, an incinerator, that must be permitted.

If You Have Questions As You Complete the Application:

The Nebraska Department of Environmental Quality, Air Quality Division (NDEQ) has a Compliance Assistance Coordinator who can help you. You can reach the Coordinator at (402) 471-3305 or via e-mail at

NDEQ.AirQuality@nebraska.gov.

What Is A Source?

Title 129, Chapter 1, Section defines a source as “any property, real or personal, or person contributing to air pollution.” As you read through the instructions and complete the accompanying application, “source” will mean the property where the incinerator is located.

What is An Incinerator?

Title 129, Chapter 1, Section 068 defines an incinerator as “any furnace used in the process of burning solid waste, except for a furnace owned and operated by law enforcement agencies solely to dispose of ammunition, fireworks or similar flammable or explosive materials.” Please note that the NDEQ considers burn-off ovens to be incinerators.

Which Incinerators are Exempt?

Title 129, Chapter 22, Sections 001.01 through 001.05 list the types of incinerators that do not have to obtain construction or operating permits:

- Incinerators located on residential premises containing five or less dwelling units and used exclusively for the disposal of waste originating on said premises
- Incinerators used solely for space heating
- Incinerators used to burn hazardous waste and subject to regulations under Title 128, Chapter 7, Section 008
- Furnaces used for law enforcement purposes specified in definition of “incinerator” in Chapter 1
- Air curtain incinerators that are subject to 40 CFR 60 Subpart AAAA, Standards of Performance for Small Municipal Waste Combustion Units or 40 CFR 60 Subpart CCCC, Standards of Performance for Commercial and Industrial Solid Waste Incineration Units.

Why Is An Operating Permit Required?

Title 129, Chapter 5, Section 001.02B requires all owner/operators of “incinerators used for refuse disposal or for the processing of salvageable materials” to obtain a Class II operating permit, with the exception of incinerators “on residential premises containing five or less dwelling units used only for disposal of residential waste generated on the said property.” Note that a burn-off oven is an example of an incinerator that processes salvageable materials.

What if I Replace My Incinerator During the Permit Term?

Incinerator replacement during the term of the general incinerator operating permit triggers a 2-step permitting process. First you must apply for and obtain a construction permit **before** you start to install the replacement incinerator. This is required by Title 129, Chapter 17, Section 001.03. Then you must apply for a new general operating permit for the replacement incinerator within 12 months of the start of operation of the replacement incinerator in accordance with Title 129, Chapter 7, Section 002.04.



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

Does A New Source Performance Standard (NSPS) Apply to My Incinerator?

If this is the initial operating permit for your incinerator, you must go through the New Source Performance Standard (NSPS) Applicability Review. A series of questions in the review will help you determine if your incinerator is subject to a NSPS. If no NSPS are applicable, you can proceed with the General Incinerator Operating Permit Application. Be sure to submit the NSPS Applicability Review with your initial application. If a NSPS is applicable, your incinerator is not eligible for a General Incinerator Operating Permit, and you must apply for a Class I or II operating permit. The application process for either of these operating permits uses a different set of application forms; please contact the Compliance Assistance Coordinator for help.

If you are renewing the operating permit for your incinerator, you will need to go through the NSPS Applicability Review to determine if recent changes in regulations have affected the eligibility of your incinerator for a General Incinerator Operating Permit. If no NSPS are applicable, you can proceed with the General Incinerator Operating Permit application. Be sure to submit the NSPS Applicability Review with your renewal application.

What If I Have More Than One Incinerator?

If you operate more than one incinerator at your source, you may obtain a permit for each incinerator or you may receive a permit that includes all incinerators. If you choose to receive a single permit for two or more incinerators, you must complete Sections 2 through 4 of the application for each incinerator. You must also complete a NSPS Applicability Review for each incinerator.

What Is the Classification of My Permit and How Does It Relate to Potential Pollutant Emissions?

Because the General Incinerator Operating Permit is a type of Class II operating permit, emissions during each period of twelve (12) consecutive calendar months must be less than the following **or** you must be willing to limit emissions to below these levels:

- 100 tons per year for each criteria pollutant
 - carbon monoxide (CO),
 - nitrogen oxides (NO_x),
 - sulfur oxides (SO_x),
 - particulate matter less than 10 microns in diameter (PM₁₀), and
 - particulate matter less than 2.5 microns in diameter (PM_{2.5})
- 5 tons per year for lead (Pb)
- 10 tons per year for each individual hazardous air pollutant (HAP)
 - arsenic (As),
 - cadmium (Cd),
 - chromium (Cr),
 - mercury (Hg),
 - nickel (Ni),
 - total tetra- through octa- chlorinated dibenzo-p-dioxin/chlorinated dibenzofurans, 2,3,7,8-tetrachlorodibenzo-p-dioxin, and dibenzofurans (CDD/CDF), and
 - hydrochloric acid (HCl)
- 25 tons per year for total HAP emissions
- 100 tons per year greenhouse gases (GHGs) **and** 100,000 tons per year carbon dioxide equivalents (CO₂e); GHGs include carbon dioxide, methane, and nitrous oxide.

If you do not want to limit emissions below these levels, you must apply for a Class I Operating Permit. The Class I application process uses different application forms, so contact the Compliance Assistance Coordinator for help.



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

How Do I Limit Potential Emissions:

If you have a construction permit for your incinerator, it may already limit potential emissions, so you don't have to do anything more for the operating permit beyond attaching a copy of the construction permit (more on this later). If your incinerator's construction permit doesn't limit potential emissions, you can request limits for the operating permit in the application. You may limit maximum throughput or hours of operation per a unit of time (e.g., year, month, etc.) in order to limit potential emissions. If you need help setting a limit, please contact the Compliance Assistance Coordinator. If you have a method of limiting potential emissions other than those discussed here, please contact the Compliance Assistance Coordinator.

Which Materials Can Be Combusted?

Your incinerator may be eligible for a general incinerator operating permit if you are combusting any of the following materials in your incinerator:

- solid waste containing less than ten percent (10%) by weight of hospital/medical/infectious waste (40 CFR 60.51c). Hospital/medical/infectious waste includes:
 - discards generated at a hospital,
 - cultures and stocks of infectious agents and associated biologicals,
 - human pathological waste, including tissues, organs and body parts removed during medical procedures,
 - Human blood and blood products including items saturated with human blood,
 - unused sharps,
 - sharps that have been used in animal or human patient care or treatment,
 - animal waste including contaminated carcasses, body parts, and bedding known to have been in contact with infectious agents during research,
 - isolation wastes that came into contact with humans or animals that are infected with highly communicable diseases,
- dry paint on hooks or salvageable parts.

Note that this list does not include all materials that can be combusted but rather those that are most commonly combusted in incinerators in Nebraska. Please contact the Compliance Assistance Coordinator if you have questions about other types of materials that can be combusted.

Which Materials Cannot Be Combusted?

You cannot incinerate the following materials in your incinerator:

- tires,
- hazardous waste (non-household generated),
- sewage sludge,
- automobile fluff,
- electrical wiring insulation combusted for metal wire recovery,
- automotive batteries and battery cases,
- used oil,
- railroad ties, or
- telephone poles

Note that this list is not intended to be all inclusive but rather provide examples of items that cannot be combusted in your incinerator. Please contact the Compliance Assistance Coordinator if you have questions about whether other types of materials can be combusted.



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

When Must I Submit an Initial Operating Permit Application?

You must submit an initial application within twelve months of when you start operating the incinerator. This is a requirement according to Title 129, Chapter 7, Section 002.06.

When Must I Submit a Renewal Operating Permit Application?

You must submit a renewal application at least six months before the existing permit expires but no more than eighteen months prior to the expiration date. This is a requirement according to Title 129, Chapter 7, Section 002.06.

How Many Copies Must I Submit?

You must submit an original General Incinerator Operating Permit Application and one copy to the NDEQ.

Where Do I Submit the Application?

Please submit the completed air quality permit application to:

Postal Mail:

Department of Environmental Quality
Air Quality Permitting Section
P.O. Box 98922
Lincoln, NE 68509-8922

Hand Delivery or Express Mail:

Department of Environmental Quality
Air Quality Permitting Section
1200 N Street, Suite 400
Lincoln, NE 68508



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

APPLICATION INSTRUCTIONS:

Be sure to include as much of the requested information in the application as you can. If some information is not available or the information requested is not applicable to your incinerator, indicate that on the application form. This will help the NDEQ when it reviews the application for administrative and technical completeness.

The numbers in the following instructions correspond to numbers on the application. **When completing the application, please type your responses or print them in ink. Do NOT use pencil.**

Section 1: Administrative Information and Certification

Source Information

- 1) Enter the legal name of the source where the incinerator is located. You must also enter the legal name at the top of each subsequent application page. Please note that the legal name is the source name registered with the Nebraska Secretary of State's office. Additional information can be found at <https://www.nebraska.gov/sos/corp/corpsearch.cgi?nav=search>
- 2) Enter the NDEQ facility identification (FID) number. You must also enter the FID number at the top of each page.
- 3) Enter the 4-digit Standard Industrial Classification (SIC) code associated with your source. If you are uncertain of your source's SIC code, please go to the following Web site and select "SIC Manual" <http://www.osha.gov/pls/imis/sicsearch.html>
The manual contains categories of codes and you can find specific codes within each category.
- 4) Enter the North American Industrial Classification System (NAICS) code(s) for your source. If you are uncertain of your source's NAICS code(s), you can determine the NAICS code(s) for your source at the following address using the 1997 NAICS to 1987 SIC code spreadsheet <http://www.census.gov/eos/www/naics/concordances/concordances.html>.
- 5) Provide a brief description of your source, for example (e.g.) metal surface coating, veterinary practice, crematorium, and so forth.
- 6-10) Enter the physical address of the source including the street address, city, zip code, and county. If you know the legal description of the property, please enter that as well (e.g. SE ¼, SW ¼, Sec 2, T 9N, R 14W).
- 11) Indicate whether your source is located within 50 miles of one of the states that borders Nebraska. If "Yes", check each state that is within 50 miles of your source.
- 12) Enter the Universal Transverse Mercator (UTM) coordinates for your source if you have them.
- 13) Indicate whether or not your source is located on leased property. If "Yes", complete #14 through #18. If "No," proceed to #19.
- 14-18) Enter the name and address information of the person or company who owns the property that is leased to your source.
- 19) Provide the legal name of the partnership, corporation, or government entity that owns your source if this name is different than that entered for #1. For national corporations, provide the name and address of the parent corporation. Note: If the name in #1 and the address in #6 through #10 are the same, please enter "see above" in #19 and leave #20 through #23 blank. Then proceed to #25.
- 20-23) Provide the mailing address of the partnership, corporation, or government entity that owns your source.
- 24) Indicate whether or not the owner is incorporated. If incorporated, provide the name of the state where the owner is incorporated.



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

INSTRUCTIONS:

Section 1: Administrative Information and Certification (continued)

Contact Information

- 25) Provide the name of the source's contact person. This is the individual that can answer questions the NDEQ may have concerning the incinerator or the application. You may designate someone else, such as a consultant, to be contacted with questions; see #31 on the application.
- 26) Provide the job title of the source contact person or describe the individual's responsibilities.
- 27-30) Provide the telephone number, alternate telephone number (such as a cellular number or a second telephone number at the source), fax number (if available), and e-mail address of the source's contact person.
- 31-37) Select the primary person for the NDEQ to contact with questions. If the primary contact is someone other than the Source Contact, please select "Other" and complete #32 through #37.

Operating Schedule

- 38) Indicate whether or not the incinerator operates seasonally. If you select "Yes," provide the range in months that the incinerator operates each year (for example, April through October).
- 39) Provide the requested operating information – hours per day, days per week, and weeks per year of operation. This information must be provided for both seasonal and non-seasonal incinerators.

Project Information

- 40) Indicate if the application is for an initial General Incinerator Operating Permit or a renewal of an existing General Incinerator Operating Permit. If this is a renewal application, provide the expiration date of the existing permit.

Historical Permitting Information

- 41) Enter the year the incinerator was initially constructed.
- 42) Indicate if your source has received one or more permits (any type) prior to this application. If the answer is "Yes", enter the date and select the type of each permit, construction permit (CP) or operating permit (OP). If your source has low emitter status (LE) or you received a no operating permit required (NOPR) determination for equipment/emissions units other than your incinerator, select "Other." Also include a brief description of each permit, e.g., CP for incinerator. Note that construction permits do not expire but rather exist until superseded by another construction permit or for the life of the incinerator.
- 43) Attach a copy of each active construction permit(s) issued for your incinerator. If you can't find a copy of a construction permit, please contact the Compliance Assistance Coordinator for help obtaining a copy.

Important: The operating permit application must include a copy of each active construction permit issued for your incinerator.

Facility and Process Information

Contact the Compliance Assistance Coordinator if you have questions related to the information requested in #44 and #45. A hand-drawn source layout diagram is acceptable as long as it is neat and its labels are legible.

- 44) Source Description
- 45) Source Layout Diagram



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

INSTRUCTIONS:

Section 1: Administrative Information and Certification (continued)

Responsible Official Certification Statements

- 46) Each application must include a compliance certification statement that states the incinerator is in compliance with the applicable requirements identified in the application and will continue to comply with these requirements. If the incinerator is not in compliance with one or more applicable requirements, the responsible official must certify the incinerator will achieve compliance. The responsible official must check the compliance certification box to signify the incinerator's compliance.
- 47) Each application must include a certification statement that states the information contained in the application is true, accurate, and complete. The responsible official must check the truth, accuracy, and completeness certification box to signify the application meets these requirements.
- 48) The application submittal package must contain the original application and one copy of the complete application. The complete application must include the NSPS applicability review and a copy of each active construction permit issued for the incinerator. The copy does not need to have the NSPS applicability review or active construction permit(s) attached.
- 49) The certification must be signed and dated in ink by a responsible official of the operator or owner of the source. **The application will be considered incomplete without a proper signature.**

Title 129, Chapter 1, Section 135, defines a Responsible Official as follows:

- 1) For a corporation:
 - a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; or,
 - b) Any other person who performs similar policy or decision-making functions for the corporation; or,
 - c) A duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or,
 - ii) The delegation of authority to such representatives is approved in advance by the NDEQ.
- 2) For a partnership or sole proprietorship: A general partner or the proprietor, respectively;
- 3) For a municipality, State, Federal, or other public agency:
 - a) Either a principal executive officer or ranking elected official.
 - b) For the purposes of this application, the principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or,
- 4) For affected sources, which are facilities with Acid Rain permits and with one or more units that is/are subject to emission reduction requirements or limitations under Title 129, Chapter 26:
 - a) The designated representative in so far as actions, standards, requirements, or prohibitions under Chapter 26, of Title 129, are concerned; and,



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

INSTRUCTIONS:

Section 1: Administrative Information and Certification (continued)

- b) The designated representative for any other purpose under the Title V program.

Section 2: Incinerator Information

- 50) Select the type of incinerator you have at your source. If you select "Other," you must contact the Compliance Assistance Coordinator for an eligibility determination before you can proceed with the application process. Once the NDEQ has determined your incinerator is eligible for a General Incinerator Operating Permit, enter the type of incinerator in the description.
- **Excess Air** refers to an incinerator where much more air than the required amount is blown into the fire in the primary combustion box.
 - **Starved Air** refers to an incinerator where there are two combustion boxes, one in which the air feed is far less than required to completely burn the waste (i.e. "starved"), and a second in which extra air is added to complete the combustion. The second chamber is often referred to as an afterburner.
- 51-54) Provide the name of the manufacturer of your incinerator and as much of the manufacturer's contact information as possible.
- 55) Indicate whether or not your incinerator is equipped with a control device that reduces emissions of pollutants. If you select "Yes," choose the control device. If the control device is not among the available options, select "Other" and enter the type in the space provided. If you select "No," proceed to #60.
- 56) Enter the control efficiency of the incinerator's control device. You can find this information in the manufacturer's specifications.
- 57) List the pollutant(s) that is/are controlled.
- 58) If your incinerator has an afterburner, please enter the combustion temperature of the afterburner in degrees Fahrenheit. You can usually find this information in the manufacturer's specifications. If you cannot find the temperature, enter "N/A" (i.e., not available).
- 59) In accordance with Title 129, Chapter 22, , the PM emissions from an incinerator cannot be in excess of 0.10 grains per dry standard cubic foot (gr/dscf) of exhaust gas, corrected to 7% oxygen. If performance testing was conducted while the control device was in operation, then use of the control device during incinerator operation is mandatory, will be a requirement in the operating permit, and you must select "Yes." If the incinerator has a control device and the preceding statement does not apply, you can choose whether or not the control device is required. Only select "No" if you are sure the incinerator can comply with the Chapter 22 limits without the control device.
- 60) Provide the type of auxiliary fuel combusted in your incinerator, if any. Your fuel provider can provide the heat content.
- 61) Enter the maximum amount of auxiliary fuel that can be combusted in the incinerator and include the units of measurement [for example, standard cubic feet per minute (scfm)].
- 62) Enter the maximum amount of material that the manufacturer says can be incinerated in your incinerator including the units (for example, pounds/hour; tons/year).
- 63) If the maximum throughput is limited either by a construction permit or if you are requesting a limit, select "Yes." Then enter the throughput limit, including the measurement units (e.g., tons/year).



Air Quality Operating Permit Application: General Incinerator Operating Permit Instructions

INSTRUCTIONS:

Section 2: Incinerator Information (continued)

- 64) If the maximum throughput in #62 or #63 is in units other than tons/year, e.g. lb/hr, then enter the maximum annual throughput as tons/year. If the maximum annual throughput in #62 or #63 is in tons/year, then proceed to #65.
- 65) If the hours of operation are limited either by a construction permit or if you are requesting a limit, select "Yes." Then enter the operational limits.
- 66) If you believe the manufacturer's specifications will help the NDEQ evaluate your incinerator, attach a copy of the specifications.
- 67) Provide as much of the requested stack information as you can. The manufacturer's specifications may contain all or most of the information. If you cannot find some of the information, enter "N/A".

Section 3: Material to be Incinerated

- 68) List or describe the material(s) that is incinerated. For example, if you operate a burn-off oven, you need to describe the type of surface coating(s) and the hooks, parts and so forth that are sent through the burn-off oven.
- 69) Select the method you use to track the materials that are incinerated. If you do not use production or weight records, select "Other" and briefly describe your recordkeeping system.
- 70) Describe how you manage ash from your incinerator and where you dispose of the ashes.

Section 4: Potential Emissions Calculations

You must calculate potential emissions from your incinerator and include them in the application. In Section 4, you will find Tables 4.1 and 4.2. You need to complete and include in the application **only** the table that applies to your incinerator. Tables 4.1 and 4.2 contain emission factors from the NDEQ's Annual Emissions Inventory Report, Form 11, with two exceptions in each table. The carbon dioxide emission factor is from USEPA's *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources* (AP-42), Fifth Edition, Chapter 2.1, Refuse Combustion, Table 2.1-7 or 2.1-9. The origin of the emission factor for particulate matter with a diameter of less than 2.5 microns (PM_{2.5}) is explained in a footnote to each table.

If you requested a limit on maximum incinerator throughput, use the limited throughput to calculate potential emissions. Otherwise use the maximum incinerator throughput provided by the manufacturer. If you have emission factors specific to your incinerator from the manufacturer or from a performance test, please use those emission factors instead of those in the application table. Identify the pollutants for which you are NOT using the emission factors provided in the application (#a) and provide the source of the emission factors you are substituting (#b).

If you selected "Other" for your incinerator type (#50), you will have to report your emissions in a summary table that you create. Be sure to include equations, emission factors, and the source of the emission factors with your summary table.

The only greenhouse gas (GHG) with an emission factor in AP-42, Chapter 2.1 is carbon dioxide (CO₂). If the manufacturer of your incinerator provides emission factors for other GHGs, calculate and include those emissions in your application.

If you have any questions while working on the potential emissions calculations, contact the Compliance Assistance Coordinator.