

Air Quality Operating Permit Application

Form 2.0: Emission Point Summary

INSTRUCTIONS:

Section 2.1-2.2: Emission Point Description & Information

IMPORTANT: Please type or print with black ink. Do NOT use pencil. If you have questions, please contact the Nebraska Department of Environment and Energy (NDEE), Air Quality Operating Permit Section, at (402) 471-2186 or NDEE.AirQuality@nebraska.gov.

SECTION 2.1: EMISSION POINT DESCRIPTION

- 1) List all emission points, emission units, and control equipment at your source in Table 1, Emission Point Description.
- 2) Assign a unique ID number to each emission point, emission unit, and piece of control equipment and use those numbers throughout the operating permit application. Note: these ID numbers should be consistent with those identified in a construction permit, unless changes have been made.
- 3) Include a description of the emission point/unit or process. The following table has examples of how to enter information into Section 2.1 for different types of equipment.

Emission Point ID#	Control Equipment ID#	Emission Unit ID#	Emission Source/Process Description
EP-001	CE-001	EU-001	Baghouse and Rail Dump Pit
EP-002	CE-002	EU-002	Thermal Oxidizer; Wet Corn Milling Dryers (2); natural gas-fired
		EU-003	
EP-003	n/a	EU-004	Reciprocating Internal Combustion Engine, compression ignition, 5,000 hp, natural gas-fired
EP-004	n/a	EU-005	Plastic Parts Coating-Equipment Cleaning, HAP-containing solvent

If your source has more emission points/units than will fit on one page, please complete multiple copies of Section 2.1. If you choose to substitute a separate summary document rather than using Section 2.1, include all of the information required by Section 2.1 and label your summary document "Section 2.1." Be sure to include the source name, NDEE identification number, and date of application on the substitute submission, and to indicate this on Form 1.0, Section 1.1 Checklist.

SECTION 2.2: EMISSION POINT INFORMATION

NDEE is developing a comprehensive database of air dispersion modeling information for the State of Nebraska. NDEE's goal is to assure that any modeling done for an area is representative of source characteristics. Section 2.2 collects the needed database information. Please complete this section even if your source did not require air quality dispersion modeling during the construction permitting process. Some of the information that you entered in Section 2.1 can also be used in Section 2.2. The following definitions will help you determine which type of air pollutant sources your source has.

- Point sources: Stacks, chimneys, exhaust fans, cooling towers, or vents
- Area sources: Ponds, storage piles, or open pits
- Volume Sources: Air pollutant sources that have initial dispersion prior to release to the atmosphere

INSTRUCTIONS:

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You do not have to submit Section 2.2 if:

- 1) You are applying for an initial operating permit, and air quality dispersion modeling was required for the construction permit you received prior to submitting your operating permit application; **OR**
- 2) Your source completed a source-wide air quality dispersion modeling analysis within the last 24 months, and no new emission units have been added since the modeling was completed.

If you have questions after reading the instructions or need help completing Section 2.2, please call NDEE's Air Quality Modeler at (402) 471-0278. For the requested specific equipment parameters, please consult the specifications or other manuals that came with the equipment. If you do not find the information there or the documents are not available, check the manufacturer's website or contact the manufacturer or local distributor directly. You may estimate parameters such as height, length, and so forth when completing Section 2.2 but be sure to indicate which numbers are estimates by placing an asterisk (*) by the number. If you have questions about the best method(s) for generating estimates, please contact the NDEE Air Quality Modeler.

POINT SOURCE INFORMATION (TABLE 1)

- 1) Enter the emission point identification number.
- 2) Enter a description of the emission point.
- 3) Enter the Universal Transverse Mercator (UTM) X and Y coordinates of each emission point in meters. If you do not have coordinates for your point source, you can obtain coordinates from topographic maps or with some GPS devices. You can also obtain coordinates at some websites, such as Google™ Earth. If you have or find coordinates in latitude/longitude, you can easily convert them to UTM at <http://rcn.montana.edu/Resources/Converter.aspx>. Be sure to document the source of your UTM coordinates.
- 4) Enter the ground elevation of the emission point. Ground elevation data is available from topographic maps and some websites, such as Google™ Earth. Be sure to cite the source of your ground elevation data.
- 5) Enter the stack height (from the ground) in meters. If you do not have an exact measurement, please estimate the height. In some instances, manufacturers of equipment with stacks, such as engines, can provide this information.
- 6) Enter the exit temperature of the gas exiting the top of the stack in degrees Kelvin.
- 7) Enter the exit velocity of the gas exiting the top of the stack in meters per second.
- 8) Enter the inside diameter of the stack in meters.
- 9) Enter the flow rate of the gas exiting the top of the stack in cubic meters per second.

If your point source is a flare, you can contact NDEE's Air Quality Modeler for more information.

AREA SOURCE INFORMATION (TABLE 2)

- 1) Enter the area source's emission point identification number.
- 2) Enter a description of the area source (e.g., grain pile fugitive emissions).
- 3) Enter the UTM X and Y coordinates of the source in meters. Cite the source of your coordinates.
- 4) Enter the ground elevation of the emission point in units of meters. Cite the source of your elevation information.
- 5) Enter the east/west length, X, of the area source in meters.
- 6) Enter the north/south length, Y, of the area source in meters.
- 7) Enter the height at which air pollutant emissions are released above the ground in meters.
- 8) Enter the angle of orientation of the area source from north (moving clockwise); the angle will be between 180 and -180 degrees.
- 9) Enter the initial vertical dimension of the area source emissions plume in meters.

INSTRUCTIONS:

Section 2.1-2.2: Emission Point Description & Information

VOLUME SOURCE INFORMATION (TABLE 3)

- 1) Enter the volume source's emission point identification number.
- 2) Enter a description of the volume source emission point.
- 3) Enter the UTM X and Y coordinates of the center of the volume source in meters. Cite the source of your coordinates.
- 4) Enter the ground elevation of the volume source's emission point in meters. Cite the source of your ground elevation information.
- 5) Enter the initial lateral dimension of the volume source in meters (see table below).
- 6) Enter the initial vertical dimension of the volume source in meters (see table below).
- 7) Enter the height above ground at which air pollutant emissions are released into the atmosphere in meters.

Type of Source	Procedure for Obtaining Initial Dimension
Initial lateral dimension	
Single volume source	$O_{y0} = \text{length of side divided by } 4.3$
Initial vertical dimension	
Surface-based source	$O_{z0} = \text{vertical dimension of source divided by } 2.15$
Elevated source on building	$O_{z0} = \text{building height divided by } 2.15$
Elevated source not on building	$O_{z0} = \text{vertical dimension of adjacent building divided by } 4.3$