**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.**

You must indicate the class of your source on Form 1.0, Section 1.2. If this is your source’s initial operating permit and you aren’t sure what classification applies to your source, answer the questions in Form 3.0, Section 3.2, and submit the completed form as part of your operating permit application package. If you are renewing an operating permit and wish to change the class or status of your source, you must also answer the questions and submit the form as part of your application package.

**Definitions, Acronyms, and Abbreviations:**

You will find the following definitions helpful as you work through Form 3.0, Section 3.1-3.2.

*Actual Emissions* – the actual rate of emissions of an air pollutant from the source (a detailed definition can be found in Title 129, Chapter 1).

*Carbon dioxide equivalents (CO2e)* – an amount of greenhouse gases (GHGs) emitted. CO2e are computed by the sum total of multiplying the mass amount of emissions, in tons per year (tpy), for each of the six greenhouse gases in the pollutant GHGs, by each of the gas’s associated global warming potential (see definitions for Greenhouse Gases and Global Warming Potential).

*Fugitive Emissions*: Emissions that cannot reasonably pass through a stack, vent, chimney, or other opening with a similar function

*Greenhouse Gases (GHGs)* – the air pollutant defined as the aggregate group of six pollutant greenhouse gases, which are carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride(SF6).

*Greenhouse Warming Potential (GWP)* – the ratio of the time-integrated radiative forcing from the instantaneous release of one kilogram of a trace substance relative to that of one kilogram- of a reference gas, i.e., CO2. The pollutant greenhouse gases (GHGs) are adjusted to calculate CO2 equivalence using GWPs, which are listed in Table 1 below or can be found in 40 CFR 98, Subpart A, Table A-1, as published at 79 Federal Register 73779 on December 11, 2014.

*HAP –* Hazardous Air Pollutant.

*Legal Name* – the source name registered with the Nebraska Secretary of State’s Office.

*Potential Emissions or Potential to Emit (PTE)* – maximum capacity of a source to emit a pollutant based on its physical and operational design. Any federally enforceable physical or operational limitation on the capacity of the source to emit one or more pollutants, such as air pollution control equipment, restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, is considered part of the source design.

*Source* – the manufacturing plant, processing operation, power plant, or other source of air pollutant emissions that is physically located in Nebraska. For purposes of the application and permitting process, the source is the collection of all air pollutant emission points and/or units, including control equipment, located at the source of air pollutant emissions.

**ITEMS THAT MUST BE CONSIDERED When determining the cLASS of your source:**

Your first step in determining the class of your source is calculation of potential and actual emissions from all emission points at your source, as done in Section 3.1. Fugitive emissions are included in the calculation of potential and actual emissions if your source belongs to one or more of the source categories listed in [Title 129, Chapter 1](http://dee.ne.gov/RuleAndR.nsf/RuleAndReg.xsp?documentId=1208D973CF94DB37862565E70076E6B8&action=openDocument), Section 002.56, or any other stationary source category that is being regulated by a standard promulgated under Section 111 or 112 of the Federal Clean Air Act as of August 7, 1980.

You may choose to take a federally enforceable permit limitation so that air pollutant emissions from your source are less than those of a major source (as defined in Title 129, Chapter 1, Section 002.56). For example, accepting a limit on emissions of one or more pollutants, setting a limit on hours of source operation, limiting annual production, or agreeing to install and operate control equipment can be federally enforceable permit limitations. These limitations must be identified in the operating permit application and included in your emissions calculations.

You have the option of applying for a Class I operating permit for your source even if the actual air emissions are less than the Class I thresholds listed below. A Class I operating permit gives a source increased operational/production flexibility because the source is not limited by the Class I thresholds. However, if you opt for a Class I operating permit your source must pay annual emission fees even if the actual emissions do not exceed the Class I thresholds.

*Class I thresholds:*

* Five (5) tons/year of lead
* Ten (10) tons/year of any single hazardous air pollutant (other than lead)
* Twenty-Five (25) tons/year of any combination of HAPs
* One-hundred (100) tons/year of any other regulated air pollutant

**Table 1 — Global Warming Potentials**

[100-Year Time Horizon]

| **Name** | **CAS No.** | **Chemical formula** | **Global warming potential (100 yr.)** |
| --- | --- | --- | --- |
| Carbon dioxide | 124–38–9 | CO2 | 1 |
| Methane | 74–82–8 | CH4 | 25 |
| Nitrous oxide | 10024–97–2 | N2O | 298 |
| HFC–23 | 75–46–7 | CHF3 | 11,700 |
| HFC–32 | 75–10–5 | CH2F2 | 650 |
| HFC–41 | 593–53–3 | CH3F | 150 |
| HFC–125 | 354–33–6 | C2HF5 | 2,800 |
| HFC–134 | 359–35–3 | C2H2F4 | 1,000 |
| HFC–134a | 811–97–2 | CH2FCF3 | 1,4300 |
| HFC–143 | 430–66–0 | C2H3F3 | 300 |
| HFC–143a | 420–46–2 | C2H3F3 | 3,800 |
| HFC–152 | 624–72–6 | CH2FCH2F | 53 |
| HFC–152a | 75–37–6 | CH3CHF2 | 140 |
| HFC–161 | 353–36–6 | CH3CH2F | 12 |
| HFC–227ea | 431–89–0 | C3HF7 | 2,900 |
| HFC–236cb | 677–56–5 | CH2FCF2CF3 | 1,340 |
| HFC–236ea | 431–63–0 | CHF2CHFCF3 | 1,370 |
| HFC–236fa | 690–39–1 | C3H2F6 | 6,300 |
| HFC–245ca | 679–86–7 | C3H3F5 | 560 |
| HFC–245fa | 460–73–1 | CHF2CH2CF3 | 1,030 |
| HFC–365mfc | 406–58–6 | CH3CF2CH2CF3 | 794 |
| HFC–43–10mee | 138495–42–8 | CF3CFHCFHCF2CF3 | 1,300 |
| Sulfur hexafluoride | 2551–62–4 | SF6 | 23,900 |
| Trifluoromethyl sulphur pentafluoride | 373–80–8 | SF5CF3 | 17,700 |
| Nitrogen trifluoride | 7783–54–2 | NF3 | 17,200 |
| PFC–14 (Perfluoromethane) | 75–73–0 | CF4 | 6,500 |
| PFC–116 (Perfluoroethane) | 76–16–4 | C2F6 | 9,200 |
| PFC–218 (Perfluoropropane) | 76–19–7 | C3F8 | 7,000 |
| Perfluorocyclopropane | 931–91–9 | C-C3F6 | 17,340 |
| PFC–3–1–10 (Perfluorobutane) | 355–25–9 | C4F10 | 7,000 |
| Perfluorocyclobutane | 115–25–3 | C-C4F8 | 8,700 |
| PFC–4–1–12 (Perfluoropentane) | 678–26–2 | C5F12 | 7,500 |
| PFC–5–1–14 (Perfluorohexane) | 355–42–0 | C6F14 | 7,400 |
| PFC–9–1–18 | 306–94–5 | C10F18 | 7,500 |
| HCFE–235da2 (Isoflurane) | 26675–46–7 | CHF2OCHClCF3 | 350 |
| HFE–43–10pccc (H–Galden 1040x) | E1730133 | CHF2OCF2OC2F4OCHF2 | 1,870 |
| HFE–125 | 3822–68–2 | CHF2OCF3 | 14,900 |
| HFE–134 | 1691–17–4 | CHF2OCHF2 | 6,320 |
| HFE–143a | 421–14–7 | CH3OCF3 | 756 |
| HFE–227ea | 2356–62–9 | CF3CHFOCF3 | 1,540 |
| HFE–236ca12 (HG–10) | 78522–47–1 | CHF2OCF2OCHF2 | 2,800 |
| HFE–236ea2 (Desflurane) | 57041–67–5 | CHF2OCHFCF3 | 989 |
| HFE–236fa | 20193–67–3 | CF3CH2OCF3 | 487 |
| HFE–245cb2 | 22410–44–2 | CH3OCF2CF3 | 708 |
| HFE–245fa1 | 84011–15–4 | CHF2CH2OCF3 | 286 |
| HFE–245fa2 | 1885–48–9 | CHF2OCH2CF3 | 659 |
| HFE–254cb2 | 425–88–7 | CH3OCF2CHF2 | 359 |
| HFE–263fb2 | 460–43–5 | CF3CH2OCH3 | 11 |
| HFE–329mcc2 | 67490–36–2 | CF3CF2OCF2CHF2 | 919 |
| HFE–338mcf2 | 156053–88–2 | CF3CF2OCH2CF3 | 552 |
| HFE–338pcc13 (HG–01) | 188690–78–0 | CHF2OCF2CF2OCHF2 | 1,500 |
| HFE–347mcc3 | 28523–86–6 | CH3OCF2CF2CF3 | 575 |
| HFE–347mcf2 | E1730135 | CF3CF2OCH2CHF2 | 374 |
| HFE–347pcf2 | 406–78–0 | CHF2CF2OCH2CF3 | 580 |
| HFE–356mec3 | 382–34–3 | CH3OCF2CHFCF3 | 101 |
| HFE–356pcc3 | 160620–20–2 | CH3OCF2CF2CHF2 | 110 |
| HFE–356pcf2 | E1730137 | CHF2CH2OCF2CHF2 | 265 |
| HFE–356pcf3 | 35042–99–0 | CHF2OCH2CF2CHF2 | 502 |
| HFE–365mcf3 | 378–16–5 | CF3CF2CH2OCH3 | 11 |
| HFE–374pc2 | 512–51–6 | CH3CH2OCF2CHF2 | 557 |
| HFE–449sl (HFE–7100) Chemical blend | 163702–07–6 163702–08–7 | C4F9OCH3 (CF3)2CFCF2OCH3 | 297 |
| HFE–569sf2 (HFE–7200) Chemical blend | 163702–05–4 163702–06–5 | C4F9OC2H5 (CF3)2CFCF2OC2H5 | 59 |
| Sevoflurane | 28523–86–6 | CH2FOCH(CF3)2 | 345 |
| HFE–356mm1 | 13171–18–1 | (CF3)2CHOCH3 | 27 |
| HFE–338mmz1 | 26103–08–2 | CHF2OCH(CF3)2 | 380 |
| (Octafluorotetramethy-lene)hydroxymethyl group | NA | X-(CF2)4CH(OH)-X | 73 |
| HFE–347mmy1 | 22052–84–2 | CH3OCF(CF3)2 | 343 |
| Bis(trifluoromethyl)-methanol | 920–66–1 | (CF3)2CHOH | 195 |
| 2,2,3,3,3-pentafluoropropanol | 422–05–9 | CF3CF2CH2OH | 42 |
| PFPMIE | NA | CF3OCF(CF3)CF2OCF2OCF3 | 10,300 |