Minor Source Emissions Inventory (MSEI) Instructions

(Revised January 2027)

Iowa DNR - Air Quality Bureau
http://www.iowacleanair.gov

Submit the Minor Source Emissions Inventory with relevant supporting documents in SLEIS by May 15.

Emissions Inventory
Air Quality Bureau, DNR
6200 Park Ave Ste 200
Des Moines, IA 50321

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DNR Air Quality Contacts

Emission Inventory Questions
Nick Page 515-725-9544

Krysti Mostert 515-587-8996

Seth Anderson 515-782-3532

Greenhouse Gas Questions
Krysti Mostert 515-587-8996

Iowa Waste Reduction Center
Iowa Air Emissions Assistance Program (IAEAP)
University of Northern Iowa
319-273-8905

Air Bureau Records Center
515-210-6071

Air Bureau Numbers
515-725-8200 (phone)
515-725-8201 (fax)

Asbestos Program
Tom Wuehr 515-494-8212

Construction Permit Section
1-877-AIR-IOWA (1-877-247-4692)

Compliance Section
Mark Fields 515-343-6589

Hazardous Air Pollutants, MACTs
Sarah Mousel 515-418-7304

SLEIS Helpdesk
SLEIS electronic resources

Stack Test Information
Mark Fields 515-343-6589

Title V Operating Permits
Jeremy Arndt 515-725-9511

Polk County Air Quality
515-286-3705 (phone)
515-286-3437 (fax)

Linn County Air Quality
319-892-6000 (phone)
319-892-6099 (fax)

Online Resources

DNR Air Quality Bureau:
Air Quality Bureau Homepage

Minor Source Emissions Inventory Examples and Instructions
SLEIS Instructions

eAirServices
Access eAirServices - a secure portal for online business services. It is the entry point for the regulated community and consultants to electronically complete and file air emissions inventories and permit applications.

EPA Emission Factors

Latitude and Longitude
Google Maps
Latitude and Longitude Finder
Google Earth
GPS Visualizer

Facility Classification Systems
SIC Codes
NAICS Association

SCC Codes
For a list of SCC codes visit the Emission Tools & Calculators webpage. Scroll down to "Classification Lists and Conversions." Click on "Updated Source Classification Codes - 8/27/2026." Ethanol and Biodiesel plants should click on "Ethanol and Biodiesel Source Classification Code (SCC) List."

Calculation Spreadsheet and Tools
To access calculation spreadsheets for painting operations, haul roads, and asphalt, concrete and limestone processes visit the Emission Tools & Calculators webpage. Scroll down to "Emissions Inventory Reporting Documents" then click on the spreadsheet of interest.

Iowa Air Emissions Assistance Program (IAEAP)
https://www.iwrc.uni.edu/environmental-assistance/iaeap

Iowa Administrative Code (IAC)
https://www.legis.iowa.gov/law/administrativeRules/agencies See section 567, Chapters 21-33.

General Instructions/Purpose

Introduction

This document contains information needed to complete a ***minor source emissions inventory***. Submitting a complete inventory is required by 21.1(3) of the Iowa Administrative Code. Some companies may be unfamiliar with air quality terms; therefore, a glossary is included in Appendix A. Terms included in the glossary are bolded and italicized. In addition, general air program definitions are found in 567 Iowa Administrative Code (IAC) at the beginning of Chapters 21, 22, and 24. The IAC is available on the internet at https://www.legis.iowa.gov/law/administrativeRules/agencies.

The deadline for submitting a completed Minor Source Emissions Inventory is May 15. If you need assistance completing the inventory please contact the DNR or the Iowa Air Emissions Assistance Program.

SLEIS

Emissions inventories are submitted using DNR's online emissions inventory reporting tool called the State & Local Emissions Inventory System (SLEIS). This web-based system has been populated with emissions data and facility equipment information and allows for streamlined reporting. In addition, SLEIS offers the option of importing emissions data via a spreadsheet template, significantly reducing data entry for facilities with a large number of emission processes. See page 7 for information on how to access SLEIS. SLEIS is located at https://programs.iowadnr.gov/sleis/.

SLEIS training sessions will be announced on the eAirServices website under the "Training" menu, and through the DNR's Air Quality listserv. DNR's air quality technical listserv is targeted to the regulated public and consultants to deliver timely regulatory news, program updates, and technical guidance. To subscribe, please contact DNR's Wendy Walker at 515-250-7534 or Wendy.Walker@dnr.iowa.gov.

Other Electronic Submittal Options

For specific industry types, emissions inventories may also be submitted using DNR's emission inventory calculators located on DNR's Emissions Inventory Reporting Documents webpage. These industry types include Group 2 Grain Elevators and stationary and portable hot mix asphalt, concrete, or crushing plants.

Getting Help Completing Your Inventory

The DNR assists small businesses by funding the Iowa Air Emissions Assistance Program (IAEAP) at the University of Northern Iowa. The IAEAP has developed a support webpage that contains emissions calculators, on-line tutorials, helpful links, answers to frequently asked questions and contact information. IAEAP also offers one on one assistance as requested by facilities as time permits. If you would like to utilize this free assistance, please contact IAEAP staff by calling 319-273-8905 or visiting the Iowa Air Emissions Assistance Program website.

The DNR will provide assistance to facilities upon request or as time permits. If your facility would like assistance, please contact one of the emission inventory staff on the air quality contacts list on page 1 of this document or visit the Minor Source Emissions Inventory webpage for helpful tools, links, resources, and answers to frequently asked questions.

Please contact the DNR or IAEAP with any questions before submitting the MSEI. If the MSEI is incomplete or incorrect calculations were used, the DNR will require additional submittals until the MSEI is complete and correct.

Emissions Reporting

All regulated air pollutants including the seven ***Criteria Pollutants*** *(including* ***PM2.5****),* 188 ***Hazardous Air Pollutants*** (HAPs), and ***Ammonia*** are required to be reported in the MSEI. The definition of volatile organic compounds (VOC) can be found in Appendix A and a listing of all HAPs can be found in Appendix B. Please consult this list if you are unsure if a pollutant needs to be reported.

Emission estimates should be evaluated for all emission sources at your facility including ***fugitive emissions***. However, it may not be necessary to report all of the sources or pollutants in the MSEI. Please refer to the "Exemptions" section below for a list of sources that are considered exempt from the minor source emissions inventory.

Actual emissions are the actual rate of pollutant emissions from an emission unit. Actual emissions need to be reported for each emission unit. ***Emissions units*** may be grouped for reporting actual emissions *only* if the emission units and their processes are identical, have identical control equipment, and they exhaust to the same release point. If an emission unit has multiple processes, each process should be reported separately.

Exemptions

The DNR considers the following items exempt from MSEI reporting at this time:

1. Any pollutant with actual emissions of less than 0.005 tons per year. When reporting emissions, pollutants only need to be rounded to the nearest one hundredth of a ton;
2. If all pollutants for an emission unit have actual emissions of less than 0.005 tons per year (rounded down to 0.00 tons), then the emission unit can be excluded from the inventory;
3. Fuel-burning equipment for indirect heating and reheating furnaces with a capacity of less than 10 million BTU per hour input per combustion unit when burning natural gas or liquefied petroleum gas;
4. Fuel-burning equipment for indirect heating with a capacity of less than 1 million BTU per hour input per combustion unit when burning untreated wood or fuel oil;
5. Fuel-burning equipment for indirect heating constructed after 10/23/13 with a capacity of less than 265,600 Btu/hr. when burning untreated wood, untreated seeds or pellets, or untreated vegetative materials or burning less than 378,000 pounds/yr of the same materials;
6. Fuel-burning equipment for indirect heating constructed after 10/23/13 with a capacity of less than 50,000 Btu/hr. when burning on-spec used oil or burning less than 3,600 gallons/yr of on-spec used oil;
7. Direct-fired equipment burning natural gas, propane, or liquefied propane with a capacity of less than 10 million BTU per hour input, and direct-fired equipment burning fuel oil with a capacity of less than 1 million BTU per hour input, with emissions that are attributable only to the products of combustion;
8. An internal combustion engine with a brake horsepower rating of less than 400;
9. Any generator or engine that operated less than 100 hours during the emissions year;
10. Storage tanks with a capacity of less than 19,812 gallons *AND* an annual throughput of less than 200,000 gallons;
11. Any container, storage tank, or vessel that contains a fluid having a *maximum true vapor pressure* of less than 0.75 psia;
12. Non-production maintenance activities, which may include brazing, soldering, or welding equipment, and surface coating operations using only hand-held aerosol spray cans;
13. *Manually operated equipment* (see definition in Appendix A on page 75) used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, scarfing, surface grinding, planing, or turning;
14. Indoor-vented powder coating operations with filters or powder recovery systems;
15. Parking lots and employee roads used to get to and from work. However, unpaved and paved roads used to haul material and/or product on a regular basis must be included.

NOTE: Indoor-vented sources **MUST** be included in the inventory if they do not qualify for another exemption. If **ALL** emission units at the facility meet an exemption, the facility should submit an email or letter to the DNR explaining why the emission units are exempt and why the inventory will not be submitted. Emails may be sent to Nick.Page@dnr.iowa.gov or letters mailed to: **Emissions Inventory, Air Quality Bureau DNR, 6200 Park Ave, Suite 200, Des Moines IA 50321.**

Small Unit Exemptions

Emission units that have a small unit exemption justification document required by 567 IAC 22.1(2)"w" *do not* have to be included in the minor source emissions inventory but the exemption justification document must be attached to the inventory submittal in SLEIS. Exemption justification documents shall include the following:

1. A narrative description of how the emissions from the emission unit were determined and maintained at or below the annual small unit exemption levels.
2. If applicable, a description of air pollution control equipment associated with the emission unit and a statement that the emission unit will not be operated without the control equipment operating.

3. If control equipment is used, the applicant shall maintain a copy of any report of manufacturer's testing results of any emissions test, if available. The Iowa DNR may require a test if it believes that a test is necessary for the exemption claim.
4. A description of all production limits required for the emission unit to comply with the exemption levels.
5. Detailed calculations of emissions reflecting the use of any air pollution control devices or production or throughput limitations, or both, for the applicable emission unit.
6. Records of actual operation that demonstrate that the annual emissions from the emission unit were maintained below the exemption levels.
7. Facilities designated as major sources with respect to rules 22.4(455B) and 24.101(455B), or subject to any applicable federal requirements, shall retain all records demonstrating compliance with the exemption justification document for five years. The record retention requirements supersede any retention conditions of an individual exemption.
8. A certification from the responsible official that the emission unit has complied with the exemption levels specified in 22.1(2)"w"(1).

Emissions Estimation Methods

Emissions must be based on the best possible method. Do not use a less preferable method if a more preferable one is available. Using a less preferable or unacceptable method could result in your inventory being returned for revisions.

Regardless of the method used to calculate emissions, supporting documentation must be included with the MSEI submittal. This documentation must be sufficient in order to allow DNR to evaluate the emissions calculations.

Methods of Calculating Emissions ***(in order of preference):***

1. Continuous emissions monitoring
2. Valid stack test
3. Material balance
4. EPA-approved emission factors
5. Vendor supplied emission factors
6. Engineering estimates based on best available process operating data

- ***Continuous Emissions Monitoring*** systems measure pollutant concentrations in the exhaust stack 24 hours per day. There is no better method for determining emissions, however, these systems are very expensive and most facilities do not use them.

- A ***Stack Test*** measures the concentration of pollutants in the exhaust stack during the test period. Test periods can vary from a couple of hours to an entire day. Stack test data that are representative of current conditions can provide an accurate emission rate for many different processes and pollutants.

- ***Material Balance*** can only be used on specific types of emission units. It is most commonly used for surface coating operations (paint booths, dip tanks, etc.). Information must first be gathered on process rates, materials used, and material properties (from ***safety data sheets*** (SDS), usually). By combining this information with the knowledge of the process, an estimation of actual emissions can be made.

- ***EPA-Approved Emission Factors*** are the basis for many calculations. These factors represent industry-wide averages and show the relationship between emissions and a measure of production. You will need to access EPA's emission factors. If you encounter problems finding emission factors for a source you may contact DNR for assistance. When using EPA or other emission factors, you must use the most recently approved version. Sources of emission factors are listed in the next section below. More information about emission factors can be found on the EPA's Air Emissions Factors website.

- ***Vendor Supplied Factors*** may be used if a more preferred method is not available. Many manufacturers of industrial equipment provide emission information for their products. This data may be used to calculate emissions only if the manufacturer's data is based on approved stack testing and no significant changes have been made to the emission

unit. Supporting documentation must be included in the submittal if vendor supplied factors are used to calculate emissions.

- ***Engineering Estimation*** is allowed if a more preferred method is not available. The DNR realizes some processes exist that have no published guidance regarding the estimation of emissions. In these cases, the estimation must be the best possible assessment given the amount of data available. Supporting documentation must be submitted to show how the estimation was made.

Sources of Emission Factors

WebFIRE is EPA's searchable emissions factors database.

AP-42 COMPILATION OF AIR POLLUTANT EMISSION FACTORS is the recommended source of air pollutant emission factors, with descriptions of activities emitting criteria and hazardous air pollutants.

TANKS, Version 5.3 is a browser-based application that estimates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from fixed- and floating-roof storage tanks. TANKS is based on the emission estimation procedures from AP-42 Chapter 7 (AP 42, Fifth Edition, Volume I Chapter 7: Liquid Storage Tanks | US EPA).

Tips to Avoid Common Mistakes when filling out your MSEI:

1. Use SLEIS or the most current reporting spreadsheet for your industry type.
2. Do not use outdated or old emission factors. The most up-to-date emission factors must be used for accurate emissions calculations. If you are referencing a previous inventory, double-check all emission factors as they may have changed since the last emissions inventory submittal.
3. Remember to complete data entry for the "Facility," "Release Points," "Control Devices," "Emission Units," and "Unit Processes" buttons.
4. Check the "Summary Reports" in the State and Local Emissions Inventory System (SLEIS) to verify the emissions estimates entered in SLEIS are correct. These reports can be found on the right side of the "Emissions Report" screen for the inventory year you are reporting.
5. Many HAPs are also Volatile Organic Compounds (VOCs). List such pollutants as both a HAP and a VOC when reporting emissions.
6. There are two ways to include calculations for reported pollutants in SLEIS:
   a. Using the comments field for the pollutant
   b. Attach a document using the "Report Attachments" button. Please include all supporting documentation used to estimate emissions. Supporting documentation includes but is not limited to SDS, stack test summaries and reports, AP-42 table citation, mass balance calculations, and any correspondence with DNR or other air pollution control agencies.
7. If reported control efficiencies are higher than what is given in the Control Efficiency Guidance Document (Appendix C), these control efficiencies must be verified by test data from an EPA-approved method. Please include supporting documentation of the test data, which confirms the reported control efficiency.
8. Make sure $PM_{2.5}$ and Ammonia emissions are included where applicable. If PM_{10} emissions are being reported, remember to also include emissions estimates for $PM_{2.5}$.
9. Use correct units of measure for emission factors and annual throughput. Units of measure need to correspond between emission factors and the annual throughput.
10. Do not report total particulate matter (PM), also commonly referred to as total suspended particulate (TSP). Report only total PM_{10} (particulate matter 10 microns or less in diameter) and total $PM_{2.5}$ (particulate matter 2.5 microns or less in diameter). Total PM_{10} and $PM_{2.5}$ emissions are referred to in SLEIS as PM10-PRI and PM25-PRI.
11. Remember to include the small unit exemption justification documents for all emission units which meet 567 IAC 22.1(2)"w." Process Emissions in SLEIS **do not** need to be filled out for emission units that meet small unit exemption status. Instead, uncheck the checkbox for the process in SLEIS labeled "Process is reported?" Please see pages 4 & 5 for a complete list of what needs to be included in a small unit exemption justification document.

Submitting the MSEI to the DNR

Submittal Deadline: May 15

The emission inventory data must be submitted electronically using SLEIS or by using industry-specific spreadsheets provided by DNR.

If the facility is not required to submit the emissions inventory because they are exempt, an exemption letter or email must be returned to the DNR indicating the reasons they are exempt from the requirement.

Keep a Copy – If submitting an industry specific spreadsheet or CB-1 Form, please keep a copy for your records. DNR staff may have questions, and a copy will be useful to you when completing future MSEIs.

Confidentiality

The DNR recognizes the need to keep certain information about facility operation confidential. If you have any questions about keeping submitted information confidential, contact Kelli Book, DNR legal staff at 515-210-3408 or at Kelli.Book@dnr.iowa.gov.

SDS

If using mass balance to estimate emissions, then copies of all safety data sheets (SDS) or technical data sheets for materials used at each emission unit during the previous calendar year must be included with the MSEI submittal. Also, include the amount of each material used for each product. SDS are needed for a complete review of the submitted MSEI. Facilities may submit a paint spreadsheet in lieu of the SDS.

General SLEIS Overview

Accessing SLEIS

To access SLEIS, users must complete the SLEIS Electronic Reporting Registration Form. Email the completed form to sleis@dnr.iowa.gov. You may also mail the form to the address in the form's upper left corner.

Facilities must have a designated Facility Signatory (Responsible Official). A new Facility Signatory must submit a wet ink-signed paper copy of the SLEIS Electronic Subscriber Agreement Form to the Iowa DNR. This form is only necessary for users who will be submitting the emissions inventory. Please visit the DNR's Air Quality eAirServices website and click on the "Access Help" link under the SLEIS menu to download the SLEIS access forms.

SLEIS Help Features

SLEIS has four different help features that ensure data being input into the database is accurate.

1. **Help Link:** Every SLEIS page has a help link in the upper right corner. This help link is unique to each page and provides a brief description of the information that can be viewed or edited on the screen.
2. **Tip Tool:** Each data entry field has a tip tool associated with it. The tip tool is a green circle with a question mark in it and is located above the data field. It contains specific information on where to find the data or equations to calculate the required information for the associated field.
3. **Required Data Elements:** Data elements that are required fields are indicated by a red bar on the left side of the required field. Fields without a red bar are optional.
4. **Data Validation Help Text:** SLEIS has multiple data validation checks. If the data entered does not meet validation requirements, the requirements will be shown near the data input field in red font. Pages may contain multiple tabs and all data on the tabs must meet the data validation requirements before a save can be executed for that record. Tabs with fields that do not meet the requirements will have an exclamation point. The fields that don't meet the requirements will have red help text near them.

SLEIS Training

DNR provides SLEIS training every year. Information on SLEIS training as well as recorded sessions and video tutorials are available on the DNR's eAirServices website. Click on the "Training" link under the SLEIS menu to view upcoming training opportunities.