AIR APPLICATION INSTRUCTIONS

Registrations, Minor Source Permits, or Title V Permits

Division of Environmental Quality

Office of Air Quality, Permits Branch

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Permits in General

Do I Need A Permit?

Permitting and Registration thresholds are based on facility wide emissions and operations. Once a facility is required to obtain a permit/registration, all emission sources need to be accounted for unless the source qualifies as insignificant under Appendix A, Group B (see appendix at end of these instructions).

Unless listed below, a facility does not require an air permit or registration.

You must submit a Registration (Regulation 18.315) if your emissions are:

- 40 tons per year or more but less than 75 tons per year of carbon monoxide;
- 25 tons per year or more but less than 40 tons per year of nitrogen oxides;
- 25 tons per year or more but less than 40 tons per year of sulfur dioxide;
- 25 tons per year or more but less than 40 tons per year of volatile organic compounds;
- 15 tons per year or more but less than 25 tons per year of particulate matter;
- 10 tons per year or more but less than 15 tons per year of PM_{10};
- 1 ton per year or more but less than 2 tons per year of any single hazardous air pollutant; or
- 3 tons per year or more but less than 5 tons per year of a combination of hazardous air pollutants

You must obtain a minor source permit if your actual emissions are:

- 75 tons per year or more but less than 100 tons per year of carbon monoxide;
- 40 tons per year or more but less than 100 tons per year of nitrogen oxides;
- 40 tons per year or more but less than 100 tons per year of sulfur dioxide;
- 40 tons per year or more but less than 100 tons per year of volatile organic compounds;
- 25 tons per year or more of particulate matter;
- 10 tons per year or more of direct $PM_{2.5}$ (see regulations for definition of direct $PM_{2.5}$) ;
- 15 tons per year or more but less than 100 tons per year of PM_{10};
- 0.5 tons per year or more but less than 10 tons per year of lead;
- 2.0 ton per year or more but less than 10 tons per year of any single hazardous air pollutant;
- 5.0 tons per year or more but less than 25 tons per year of any combination of hazardous air pollutants; or
- 25 tons per year or more of any other air contaminant

You must obtain a minor source permit if your facility is one of the following (regardless of emissions):

- Medical waste incinerators;
- Rendering plants;
- Pathological waste incinerators, including crematories;
- Chemical process plants;
- Hazardous waste treatment storage or disposal facilities;
- Sour gas process plants;
- Lead acid battery recycling facilities;
- Charcoal plants; or
- The Director determines a permit is needed to protect the public health and welfare or to assist in the abatement or control of air pollution.

You must obtain a minor source or Title V permit if your facility is subject to a rule under 40 C.F.R. §§ 60, 61, or 63 as of June 27, 2008 (meaning the rule has to be in effect by that date or it is not considered in this requirement), except for:

- 40 C.F.R. § 60 Subpart AAA (Wood Stoves);
- 40 C.F.R. § 60 Subpart JJJ (Petroleum Dry Cleaners);
- 40 C.F.R. § 63 Subpart M (Perchloroethylene Dry Cleaners);
- 40 C.F.R. § 63 Subpart Q (Industrial Cooling Towers);
- Sources subject to 40 C.F.R. § 60 Subpart Dc (Steam Generating Units) which only burn gas;
- 40 C.F.R. § 63 Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines) for non-Part 70 sources (minor sources);
- 40 C.F.R. § 63 Subpart WWWWW (Hospital Ethylene Oxide Sterilizers);
- 40 C.F.R. § 63 Subpart CCCCCC (Gasoline Dispensing Facilities);
- 40 C.F.R. § 60 Subpart IIII (Stationary Compression Ignition Internal Combustion Engines) for engines with a displacement of less than 30 liters per cylinder;
- 40 C.F.R. § 60 Subpart JJJJ (Stationary Spark Ignition Internal Combustion Engines); and
- 40 C.F.R. § 63 Subpart HHHHHH (Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources).

You must obtain a Title V (Major Source) permit if your emissions are:

- 100 tons per year or more of carbon monoxide;
- 100 tons per year or more of nitrogen oxides;
- 100 tons per year or more of sulfur dioxide;
- 100 tons per year or more of volatile organic compounds;
- 100 tons per year or more of PM_{10};
- 100 tons per year or more of $PM_{2.5}$;
- 10 tons per year or more of lead;
- 10 ton per year or more of any single hazardous air pollutant;
- 25 tons per year or more of any combination of hazardous air pollutants; or

You also must obtain a Title V (Major Source) permit for the following sources/facilities:

- Certain other non-major sources may require an operating permit. This generally includes sources subject to a Federal regulation that specifically state that a Title V permit is required in the rule. See Chapter 3 Sec. 26.302 of Regulation #26 for more information.

What Type Of Permit Application Do I Need To Submit?

Except for General Permits, all permit application forms are contained in the same single package. There are no separate application forms for initial permits or modifications to an existing permit. Complete only the sections necessary as indicated in the forms, instructions and checklists based on permit and application type. If you complete your application form in ePortal, then the ePortal system will guide you to the correct forms that need to be completed based on your selection of the permit and application type.

Initial applications must contain information on all emission sources at the facility.

Registration Applications always contain facility wide information. An approved Registration is valid unless operations change at the facility so that the initial application is no longer representative of operations. In that case, submit a complete new registration to the Division of Environmental Quality.

Modifications are to add or change emission sources listed in the permit. Generally, only information regarding the change is needed.

Minor Modifications and De Minimis applications are small modifications to a permit that allow for expedited review and approval by the Division of Environmental Quality. Refer to the definitions in Regulation 26 and 19 for details on qualifying changes and the attached checklist used by the Division of Environmental Quality.

Administrative Amendments are limited to typographical errors, insignificant sources and other such changes. Refer to the definitions of Administrative Amendment in Rule 19 and Regulation 26.

Renewals are required for major source/Title V permits only. These permits are valid for 5 years. The facility must apply for renewal. Application for renewal must be **received and complete** at least 6 months, but no more than 18 months before the date of permit expiration. Permit expiration terminates a source's right to operate unless a timely and complete renewal application has been submitted, in which case the existing permit shall remain in effect until the Division of Environmental Quality takes final action on the renewal application. Renewal permits are subject to the same application and procedural requirements that apply to initial permit issuance, that is, all information on all sources needs to be included.

General Permits are standardized permits for specific categories of facilities. General permits are an option to a traditional permit application. A facility can apply for coverage under a general permit by submitting the appropriate Notice of Intent (NOI). The general permit is a pre-written permit containing terms and conditions and does not change based on the facility. Refer to the DEQ, Air Permits Branch website for a current listing of general permits and application forms (NOIs).

General Information on Air Permitting

Prohibitions on Construction and Installation: No proposed new facility subject to Minor Source Permit or Title V requirements can begin construction or modifications before obtaining the proper air permit if one is required. Exceptions are:

Minor Sources can begin construction of a new emissions unit or begin modification to an existing emissions unit if the modification qualifies and has been approved by the Division of Environmental Quality as a De Minimis change in accordance with Reg.19.407(C) or Reg.18.307(C).

Title V/Operating Permits sources can begin construction of a new emissions unit or begin modification to an existing emissions unit if the modification qualifies and has been approved by the Division of Environmental Quality as a minor modification in accordance with Chapter 10, Reg.26.1002.

Applicable Regulations: Before completing this application, the applicant should review all state and/or federal air pollution control regulations that apply to the facility. Not all regulations will apply to all sources. This information is provided as a general overview to aid in determining which applicable regulations pertain to a source.

The Arkansas Air Pollution Control Code (the Air Code, Regulation No. 18): This regulation is a State regulation and is applicable to any source that emits or has the potential to emit any air contaminant. Permit requirements under Regulation No. 18 are not federally enforceable. The Air Code applies to all permits.

Rules of the Arkansas State Plan of Implementation for Air Pollution Control (SIP, Rule 19) pertaining to air pollution control requirements for sources subject to the federal Clean Air Act, including Prevention of Significant Deterioration (PSD) regulations.

Regulation of the Arkansas Operating Air Permit Program (Regulation No. 26). This contains the requirements for Major Source/Title V air permits.

Standards of Performance for New Stationary Sources (NSPS) contained in 40 C.F.R. § 60 pertaining to specific categories of new, modified, and reconstructed sources of air pollutants.

The federal NSPS, 40 C.F.R. § 60, apply to certain categories of new, reconstructed, and modified stationary sources of air pollution. The standards set emission limits for specific pollutants for the emission source category. For most affected source categories, the standards require reporting and emission testing requirements. The Division of Environmental Quality has been delegated the authority to administer and enforce most NSPS. For a list of the NSPS subtitles, please contact the Division of Environmental Quality.

National Emission Standards for Hazardous Air Pollutant (NESHAP) contained in 40 C.F.R. §§ 61 and 63 and Section 112 of the federal Clean Air Act.

The federal NESHAP, 40 C.F.R. §§ 61 and 63, apply to certain categories of stationary sources, both existing and new, emitting air pollutants designated as hazardous under Section 112 (Title III) of the federal Clean Air Act (CAA). 40 C.F.R. § 61 is the existing NESHAP regulations, 40 C.F.R. § 63 includes the Maximum Achievable Control Technology (MACT) standards, and Section 112 of the Act pertains to the promulgation of the list of 187 Hazardous Air Pollutants (HAPs). The appendices to these instructions contain a list of the 187 HAPs.

Prevention of Significant Deterioration (PSD) Regulations: DEQ adopted the federal PSD regulations, 40 C.F.R. § 52.21, with minor revisions and additional requirements, as part of the SIP. The

intent of the PSD regulations is to prevent the deterioration of air quality in areas where air quality is better than the National Ambient Air Quality Standards through preconstruction review of sources.

A new source is defined as major, and therefore subject to PSD review, if its "potential to emit" (for PSD purposes this is equivalent to the proposed maximum annual emissions, after the application of control equipment) exceeds 100 tons per year of any pollutant regulated under the Clean Air Act, if the source is included in any of 28 named source categories, or 250 tons per year if the source is not included in any named source category. A modification is major, and therefore subject to PSD review, if the net emissions increase of any regulated pollutant, by itself, would meet the above definition of a new major source. If an existing source is already major for any regulated pollutant, as defined above, a modification is major, and therefore subject to PSD review, if the net emissions increase of any regulated pollutant exceeds the significance level for that pollutant, as defined in the PSD regulations.

Sources that may be subject to PSD review should review the regulations to determine applicability and analyses required. DEQ recommends a pre-application meeting.

If a source is subject to PSD review, the following information will be required:

- Information necessary to determine compliance with all SIP, NSPS, and NESHAP applicable emission limitations.
- Information necessary to determine application of the best available control technology (BACT) to the emissions of all applicable pollutants.
- An ambient air impact analysis that includes modeling using USEPA approved computer models and techniques in conformance with guidance from the USEPA.
- Information as required to perform visibility and additional impact analysis.
- Ambient air quality data for applicable pollutants, subject to the exemptions contained in the PSD regulations. Up to one year of ambient air quality monitoring may be required to be conducted by the applicant before an application can be considered complete. A monitoring plan shall be submitted to the Division of Environmental Quality for approval before initiation of monitoring.

Greenhouse gases (GHGs): GHG is a combination of six pollutants (carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) and quantified as a CO_2 equivalent (CO_2e). For each pollutant, its emission rate (tpy) is multiplied by its global warming potential (GWP). That product is summed along with the products determined for the other pollutants to obtain the total CO_2e (tpy).

For example, a source emitting 10 ton per year (tpy) of CO_2, 3 tpy of methane and 1 tpy of nitrous oxide would have a CO_2e of (10 x 1) + (3 x 25) + (1 x 298) = 383 tpy CO_2e

Facilities applying for a permit issued under Rule 19, Chapter 9: PREVENTION OF SIGNIFICANT DETERIORATION that include an increase of 75,000 tpy CO_2e for GHG need to include details on emission rates and other GHG information. Consult with the Division of Environmental Quality if you are unsure of these regulations.

112(g) Applicability: For major stationary source of Hazardous Air Pollutants (HAPs), when no applicable federal emission limitation has been promulgated, the Clean Air Act requires the state permitting authority to determine a MACT emission limitation on a case-by-case basis. This rule assures that effective pollution controls will be required for new major sources of air toxics during the period before EPA can establish a national MACT standard for a particular industry. Section 112(g) applies to the owner of operator of a constructed or reconstructed major source of hazardous air pollutants (HAPs).

Section 112(g) requires MACT-level control of air toxics when a new major source of HAP is constructed or reconstructed.

The application requirements for a case-by-case MACT determination are outlined in 40 C.F.R. § 63.43(e). If a source is subject to 112(g) review, the following information will be required:

- A brief description of the major source to be constructed or reconstructed and identification of any listed source category or categories in which it is included.
- Any federally enforceable emission limitations applicable to the constructed or reconstructed major source.
- DEQ may ask for the maximum and expected utilization of capacity of the constructed or reconstructed major source, and the associated uncontrolled emission rates for that source, to the extent DEQ needs this information to determine MACT.
- DEQ may ask for the controlled emissions for the constructed or reconstructed major source in tons/yr at expected and maximum utilization of capacity, to the extent DEQ needs this information to determine MACT.
- A recommended emission limitation for the constructed or reconstructed major source consistent with the principles set forth in 40 C.F.R. § 63.43(d).

Confidential information: All construction, emission, and operating information contained in the permit application and any changes, modifications, or alterations in the permit application submitted to the Division of Environmental Quality in writing will become part of the Division of Environmental Quality's permanent files and will be available for public inspection unless clearly marked confidential and approved as confidential by the Division of Environmental Quality's legal staff. The applicant must submit the confidential applications separately from publicly available information, and accompanied by a notarized affidavit of confidentiality. In addition, submit a complete public (non-confidential) application to DEQ. At this time, confidential information should not be submitted through ePortal.

Permit Fees: Minor Source and Title V permit fees are based on the permitted volume of air pollutants emitted from the facility. The applicant must pay the initial permit issuance fees or permit modification fees and any past due DEQ fees before the final permit issuance. The applicant must pay the annual permit fees to keep the permit active. The Division of Environmental Quality will calculate the permit fees (in accordance with Chapter 5 of Regulation #9) and send an invoice to the facility. A copy of Chapter 5 of Regulation #9 can be found on our website.

Electronic Application Submittal: ePortal should be used to electronically submit applications.

Permit Processing: DEQ will not consider an application complete until the applicant submits all information required to consider the application. An application consists of completed permit application forms along with the enclosures and attachments referred to in these instructions and any additional information required for Prevention of Significant Deterioration (PSD) applications or MACT determinations. Upon declaring the permit application administratively complete, other than minor modifications, de minimis or administrative amendments, the Division of Environmental Quality will provide a public notice to the permittee to publish in the local paper. A 10-day comment period for the receipt of application will begin on the date of publication of the notice. DEQ cannot issue a draft permit before the close of the 10-day period, pursuant to Act 163 of 1993.

The project engineer will review each application for technical completeness of information submitted. During the review, DEQ may contact the applicant for clarification or additional information. When the applicant submits all pertinent information, the project engineer will draft a permit and forward the draft permit to the Office of Air Quality staff for in-house review.

A draft public notice and comment period is required for all draft permits except De Minimis and Administrative Amendments. The draft public notice results in a minimum period of 30 days after publication of the notice before DEQ can issue a final permit. A proposed Operating Air Permit is subject to a 45 day EPA comment period. In some cases, the draft permit and EPA comment periods can run concurrently. Final permit issuance may be further delayed if a public hearing or substantial response to comments is necessary. The applicant is responsible for the costs associated with publication of public notices.

Application Form Completion Instructions

Use the checklists in the appendix to these instructions as a guide to determine the appropriate attachments to submit with the application forms. Failure to submit the appropriate attachments may result in an administratively incomplete application. Note that not all of these elements are required for all permit applications.

Explanation for Not Using ePortal

1. It is requested that you use ePortal to electronically submit non-confidential applications. For those submitting paper applications, please explain why you are not submitting the application electronically using ePortal.

General Information

2. **AFIN:** The AFIN number is a unique identifier DEQ assigns to all facilities. The first two digits indicate the county and the last five are sequence numbers. If the AFIN number is unknown, search for the AFIN at the DEQ website at http://www.adeq.state.ar.us/home/pdssql/pds.aspx for an existing AFIN number. All offices use the same numbering system, so even facilities applying for a new air permit may already have an AFIN issued by another office. If no AFIN exists, indicate "Not Assigned".

3. **Type of Permit:** Indicate if this application is for a Registration, a Minor Source air permit, or a Title V/Major Source air permit.

4. **Type of Permit Application or Registration:** Select the appropriate option that indicates the type of application submitted. It is best, though not required, to submit separate applications if the application involves more than one type. If one application contains multiple types, please clearly indicate these in the submittal. To aid in determining the necessary permit action, the table below summarizes the options:

Type of Permit Application or Registration	Applicability Description
Initial (New) Permit (Includes changes between Minor, Title V, Registrations and General Permit types)	Initial Permit applies to new or existing facilities that do not have an air permit or are switching between types of permit. Applies to unpermitted existing facilities.
Renewal Of Existing Permit (Title V Permits Only)	This applies to the renewal of a current active Title V permit at the end of the 5 year term. Such applications need to be submitted at least 6 months prior to the date of permit expiration.
Significant Modification	This applies to facilities having a current permit and proposing to make modifications that do not qualify as Minor Modifications/De Minimis or Administrative Amendments.
Minor Modification (Title V Permits Only)	This applies to facilities having a current air permits and proposing to make modifications meeting the Minor Modification criteria outlined in Reg.26.1002-1009.

Type of Permit Application or Registration	Applicability Description
De Minimis (Minor Source Permits Only)	This applies to facilities having a current air permits and proposing to make modifications meeting the De Minimis criteria outlined in Reg.19.407(C) or Reg.18.307(C).
Administrative Amendment	This applies to facilities having a current permit and proposing to make Administrative permit amendments that meet the criteria outlined in Regulation 18, Rule 19 or Regulation 26.
Initial (New) Registration (Includes changes from Minor, Title V, and General Permit types)	Initial Registration applies to new or existing facilities that do not have a registration or are switching from a permit to a registration. Also applies to unregistered existing facilities.
Registration Modification	This applies to facilities having a current registration and proposing to make modifications to that registration.

5. **List All Changes and Revised Sources:** Specifically identify all changes requested with the application. Changes not specifically identified may not be reviewed or incorporated into the draft permit.

6. **Current Active Registration or Air Permit Number for the Facility (If Applicable):** If the facility has a current active permit number or registration, enter it here. Include any Registration or General Permit, if applicable.

7. **Construction, Reconstruction, and Operation Dates:** If the facility is a new facility or the modifications to the facility involve construction of new emission units or reconstruction, enter the proposed construction or reconstruction and operation dates. If a modification does not involve construction of new emission units or reconstruction, enter "Not Applicable" for this item for paper submissions. [Note: Permits are generally required before any construction may commence. Contact the Division of Environmental Quality for more information and exceptions.]

8. **Air Application Contact Information:** In many cases, the person who prepared and is most knowledgeable about the permit application is someone other than the person who signed the application. Information in this table should allow DEQ to contact this person. If this section is blank and DEQ requires additional information, DEQ will contact the person listed as the mailing address contact. The PHONE Numbers and FAX Numbers should be for the permit application contact person. If the phone or fax numbers are unknown at the time of the submission of the application, the applicant can supply the phone or fax numbers later. The EMAIL address is the email address for the permit application contact.

Applicant Information

Complete this section for any type of permit or registration.

9. **Legal Name – Facility Name:** The LEGAL NAME should be the same as the name registered with the Secretary of State, if required. The legal name and facility name (if indicated) will appear on the permit.

10. **NAICS (North American Industry Classification System) Code and Description:** The North American Industry Classification System (NAICS) is a system for classifying business establishments.

Adopted in 1997 to replace the old Standard Industrial Classification (SIC) system, NAICS is the industry classification system used by the statistical agencies of the United States.

11. **Facility Physical Address:** The PHYSICAL ADDRESS OR LOCATION must indicate the physical address of the facility. If the facility does not have an address, provide information indicating the physical location (for example, State Highway 110 in Wilburn and go Northeast on County Road approximately 3 miles at intersection and turn left, etc.). If the facility is not in a city, indicate the nearest city on the CITY line and the zip code on the POSTAL CODE line.

12. **Facility Physical Location Latitude and Longitude:** Indicate the latitude and longitude of the facility's geographic center. Please use NAD 83 Latitude/Longitude Coordinates.

13. **Facility Mailing Address:** The mailing address is where DEQ will send the final permit. Draft permits will be sent to the mailing address contact via email if one is provided. Otherwise, the draft permit will be mailed to the mailing address contact. The address may be the same as the physical location of the facility or the address may be different, such as a corporate headquarters. The CONTACT is the person who will receive the draft and final permits and any correspondence relating to the permit and the rest of the information should pertain to this individual. The PHONE Numbers and FAX Numbers should be for this person. If the phone or fax numbers are unknown at the time of the submission of the application, the applicant can supply the phone or fax numbers later. The EMAIL address is the email address for the contact. If the mailing information is the same as the physical information, the facility may so indicate by writing "same as physical address" or drawing an "x" through the mailing address table if submitting a paper submission. [DEQ requires the facility to keep a copy of the permit on the premises where the permitted equipment is located. The facility is responsible to see that a copy of the permit is at the facility.]

14. **Billing Information:** The address in this table is where DEQ will mail the permit fee invoice. If blank, DEQ will send the invoice to the Facility Mailing contact and address. The PHONE Numbers and FAX Numbers should be for the invoice contact. If the phone or fax numbers are unknown at the time of the submission of the application, the applicant can supply the phone or fax numbers later. The EMAIL address is the email address for the invoice contact.

15. **Legal Organization:** The facility must properly identify the legal organization of the applicant.

16. **Arkansas Secretary of State Registration:** Indicate if the applicant is registered with the Arkansas Secretary of State and, if registered, enter the **Secretary of State's Filing Number**. All Corporations, Limited Liability Companies, and Limited Partnerships must be registered and in good standing with the Arkansas Secretary of State (SOS) and the state of origin (if other than Arkansas). In addition, the legal name must match the name filed with the SOS.

17. **Domestic or Foreign:** If the applicant is registered with the Arkansas Secretary of State, indicate if the applicant is domestic (Arkansas), foreign (chartered outside of Arkansas), or an entity that is not required to register with the Arkansas Secretary of State.

18. **Attach Proof of Good Standing from the State of Origin (If Not Arkansas):** This can be a current Certificate of Good Standing or other proof such as a currently dated webpage status listing from the State of Origin. All Corporations, Limited Liability Companies, and Limited Partnerships must be registered and in good standing with the state of origin (if other than Arkansas). Government Entities, Solely Owned Proprietorships, General Partnerships, and Cooperatives are not required to register with the secretary of state.

19. **Disclosure Statement:** Act 454 of 1991 requires that all permit applicants for an initial permit, Registration, Renewal of Permit, or a transfer of ownership submit a disclosure statement. The disclosure form can be obtained at http://www.adeq.state.ar.us/disclosure_stmt.pdf

    Publicly Held Companies: A publicly held company that is required to file periodic reports under the Securities and Exchange Act of 1934, or a wholly-owned subsidiary of a publicly held company, shall

submit the most recent annual and quarterly reports required by the Securities and Exchange Commission, which provide information regarding legal proceedings in which the applicant has been involved.

20. **Responsible Official Information:** Indicate the name, title, and company of the individual that will certify the application. The responsible official must meet the regulatory definition. https://eportal.adeq.state.ar.us/webfiles/Air/Instructions/Responsible_Official_Definition.pdf

21. **Responsible Official Qualification:** Indicate how the person certifying this application meets the regulatory definition of a responsible official. If the responsible official has been delegated that authority, attach a copy of the delegation of authority letter. Someone who is delegated must meet the criteria in the definition of responsible official (they must be responsible for the overall operation of one or more facilities subject to a permit).

Registration Information

Complete this section only if you are applying for a Registration. This section plus the General Information, Applicant Information, Applicable Federal Regulations, Process Information, emission calculations part of the Emission Information Section, Certification of Application, and a Disclosure Statement constitute an application for Registration. If you are not applying for a Registration, check the box to indicate that you are skipping this section.

22. **Total Actual Emissions:** Denote the facility's total tons per year (tpy) for each pollutant (this value does not always correspond directly to the maximum hourly emission rates). This value may be limited by hours of operation limits or by throughput/production limits. If this value indicates less than continuous operation at maximum operating rates, the permittee should clearly denote in the supporting calculations the factors (i.e. production limits, or hour of operation limits, etc.) used to limit the emission rates. If the facility is proposing to operate on a continuous basis, the applicant should calculate the annual emissions based upon 8,760 hours per year of operation. Round this value up to the nearest tenth or report two significant digits for criteria pollutants. Do not round for other pollutants. Enter "0" if the pollutant is not emitted.

Title V Information

Complete this section for Title V/Major Source Air Permit Applications only. These questions do not apply to minor source or Registration applications. If you are applying for a Title V administrative amendment, minor source permit, or a registration; check the box to indicate that you are skipping this section.

23. **Neighboring States:** If the facility location is within fifty miles of a neighboring state, select the appropriate state(s). If no state is within fifty miles of this facility, select the "No State within 50 Miles" option.

24. **Compliance Plan and Schedule:** The applicant must submit a compliance plan and schedule if the permittee is out of compliance. If the facility is in compliance, selecting the appropriate checkbox on the Certification of Compliance qualifies as the Compliance Plan.

    The Compliance Plan requires the following:

    A compliance plan for all part 70 sources that contains all the following:

    a. A description of the compliance status of the source with respect to all applicable requirements.

    b. A description as follows:

        i. For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with such requirements.

ii. For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis.

iii. For requirements for which the source is not in compliance at the time of permit issuance, a narrative description of how the source will achieve compliance with such requirements.

The Compliance Schedule must:

Provide the requested information concerning current and future compliance plans and schedules of the facility with applicable requirements.

a. For applicable requirements with which the facility is in compliance, a statement that the facility will continue to comply with such requirements.

b. For applicable requirements that will become effective during the permit term, a statement that the facility will meet such requirements on a timely basis, unless a more detailed schedule is expressly required by the applicable requirement.

c. A schedule of compliance addressing all applicable requirements for which the facility is not in compliance at the time of permit issuance. Such a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the source will be in noncompliance at the time of permit issuance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

d. Provide a schedule for submission of certified progress reports no less frequently than every 6 months for sources required to have a schedule of compliance to remedy a violation.

e. For each source subject to the acid rain provisions, requirements specified in this section shall apply and shall be included in the acid rain portion of a compliance plan. The plan shall identify the schedule and method(s) the source will use to achieve compliance with the acid rain emissions limits.

25. **Compliance Assurance Monitoring Plan:** contained in 40 C.F.R. §§ 64, 70, and 71. Compliance assurance monitoring (CAM) applies to major stationary sources of air pollution required to obtain a Title V operating permit. The CAM rule requires owners or operators of such sources to conduct monitoring satisfying particular criteria established in the rule to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act. The CAM rule aims to have owners and operators maintain control devices at the levels that assure compliance. Monitoring will focus on emissions units that rely on pollution control device equipment to achieve compliance with permitted emission limits. The rule allows owners and operators to design CAM plans on current requirements and operating practices; to select representative parameters upon which compliance can be assured; to establish indicator ranges or procedures for setting the indicator ranges for the parameters; to use performance testing and other information to verify the parameters and ranges; and to correct control device performance problems as expeditiously as practicable. CAM plan examples may be found at: https://www.epa.gov/air-emissions-monitoring-knowledge-base/compliance-assurance-monitoring-technical-guidance-0.

26. **112(g) Applicability:** If the facility will engage in construction or reconstruction that will require a 112(g) application, please select the appropriate option. This applies to Title V permits only. Refer to the 112(g) section under the General Information on Permit Applications section above. If the application triggers 112(g), attach the 112(g) application.

27. **Title VI Applicability:** Items a, b and c determine Title VI applicability. Select the appropriate answer option, “yes” or “no” for each item. For item b, if the refrigeration charge of the unit is unknown,

contact the equipment manufacturer or a vendor to obtain this information. In general, household size refrigerators and air conditioners will have a charge of less than 50 pounds per unit.

28. **Accidental Release Applicability:** Indicate if the facility is subject to and in compliance with the Accidental Release Prevention requirements of Section 112(r) of the Clean Air Act by selecting the appropriate option. If the facility is subject to the requirements, but is not in compliance, attach a § 112(r) compliance plan. If unknown whether the facility is subject to these provisions, refer to 40 C.F.R. § 68. "Threshold Quantities" are listed in 40 C.F.R. § 68.130. If the facility stores, produces, or transfers in excess of the "Threshold Quantity" of the listed substance, the facility is subject to the requirements outlined in Section 112(r). Initially affected facilities must submit a Risk Management Plan (RMP) by June 21, 1999.

    The Division of Environmental Quality has not been delegated authority for the 112(r) program and; therefore, is not currently receiving or reviewing submittals. The Division of Environmental Quality, as the permitting authority, must:

    a. verify that the source owner or operator has registered and submitted an RMP or a revised plan when required;
    b. verify that the source owner or operator has submitted a source certification or in its absence has submitted a compliance schedule;
    c. for some or all of the sources, use one or more mechanisms such as, but not limited to, a completeness check, source audits, record reviews, or facility inspections to ensure that the permitted sources are in compliance with the requirements; and
    d. initiate enforcement action as appropriate.

29. **Acid Rain:** Facilities subject to these regulations must apply for permits under 40 C.F.R. § 72. Indicate if the current application/plans are attached to the current permit or if the facility is not subject to the Acid Rain provisions. If the current application/plans are not attached to the current permit, attach a copy of the up-to-date application/plans (available from EPA).

30. **Cross-State Air Pollution Rule (CSAPR)/Transport Rule (TR):** Indicate if the current TR Monitoring Provisions Table is attached to the current permit or if the facility is not subject to the CSAPR/TR monitoring provisions. If the current TR Monitoring Provisions Table is not attached to the current permit, attach the completed Description of TR Monitoring Provisions Table. If unknown whether the facility is subject to these provisions, refer to 40 C.F.R. § 97 Subpart EEEEE. Any stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, on or after January 1, 2005, a generator with nameplate capacity of more than 25 MWe producing electricity for sale is subject except as provided in 40 C.F.R. § 97.804(b).

31. **Permit Shield:** A permit shield is provisions added to a Title V permit which state that compliance with the permit conditions shall be deemed compliance with all applicable requirements, at the time of permit issuance, as identified in the shield. Indicate if the facility is requesting that a permit shield (40 C.F.R. § 70.6(f)) be included in the permit. The applicant will need to provide the applicable and inapplicable regulations, relevant sources, and the description of applicability to include in the permit shield.

Prevention of Significant Deterioration (PSD) Information

32. **PSD Applicability:** Indicate if the facility will engage in construction, reconstruction, or modifications requiring a PSD application.

    If the facility is a major source as defined in PSD rules the application may be subject to the requirements of Chapter 9 of Rule 19. Attach an explanation of why this permit application is not subject. Be sure to follow the procedures of 40 C.F.R. § 52.21 if determining whether or not a significant emission increase and a significant net emission increase will occur**.**

If this application requires PSD review, submit:

33. **Class I Area Modeling Analysis Form:** Complete the Request for Applicability of Class I Area Modeling form (available on the website). For paper submissions, attach it to the application and email it to airpermits@adeq.state.ar.us. For online submissions, attach the form to ePortal. This form is sent to the Federal Land Manager for their review of the impact of the proposed permit.

34. **Best Available Control Technology (BACT) Analysis:** Attach the BACT Analysis.

35. **Other PSD Analyses:** Attach other PSD Analyses including: increment, NAAQS, visibility, soils, vegetation, and associated growth.

Applicable Federal Regulations

36. **Applicable Federal Regulations:** If the facility is subject to any of the rules found in 40 C.F.R. §§ 60, 61 or 63, indicate which specific subparts and the affected sources that are applicable to this application. If the application involves additions or changes to operations regulated by one of these subparts, or if the application is for a Title V renewal, a detailed listing of the subpart requirements must be included in the application. Do not list the subparts in general; the list must include details, especially where the subpart has options or requirements based on different equipment specifications. If the permit already contains the correct requirements in specific or plant wide conditions, this can be used for the basis of the list but still must be included.

Process Information

37. **Process Description:** A written description of the process must accompany each application. This must include a description of each relevant piece of equipment and process. The description must be in sufficient detail to provide the permit engineer an understanding of the process. The applicant should place special emphasis on any process or equipment with the potential to emit any pollutants to the atmosphere. The process description should describe material flow between processes (if any) and the source (SN) to which each process is vented should be identified in the narrative. The applicant should describe any work practice standards used to control emissions.

38. **Process Flow Diagram:** The process flow diagram must be in sufficient detail to understand the general process. The process flow diagram must clearly identify all relevant processes or pieces of equipment. All points where raw materials and/or chemicals are introduced into the process and all points where intermediate and/or finished products are removed from the process must be clearly identified with quantities of materials shown. The process flow diagram should show material flow between processes (if any) and the applicant should identify the source number (SN) on the diagram.

39. **Operating Scenarios:** Indicate if this facility has alternate operating scenarios. Describe all alternate operating scenarios the applicant desires for this emission source. Submit a complete set of attachments (i.e. process flow diagrams, process description, emissions calculations, emission rate tables, etc.) for each desired operating scenario. Note: The permittee may implement any alternative operating scenarios allowed by the permit without incurring a permit modification, thus minimizing delays in production. The permit will allow only those operating scenarios specifically described in the application. Alternate operating scenarios may include the desire to permit two fuels, such as natural gas and No. 2 fuel oil, for a boiler or it may involve the option to produce product X or product Y from the same manufacturing line. Also, phased construction such as using an existing piece of currently permitted equipment (e.g. boiler) until a new piece of equipment is built and operational should be listed as an operating scenario.

Site Information

40. **Plot Plan:** Show the property, to scale, indicate the location of the property boundaries with the applicable scale, the location of all sources of any air pollutants (identified by source number), true north direction, and any other information deemed relevant by the applicant.

41. **USGS Area Map:** Submit one original U.S. Geological Survey topographic map (7.5-minute series) with the location of the facility indicated.

Emission Information

42. **Emission Calculations:** Provide detailed calculations for the emissions of the pollutants. The calculations must contain a detailed explanation of the source of the emission estimation.

43. **Emission Rate Tables:** The applicant must complete an Emission Rate Table form and calculations for each significant air pollutant emission source located at a facility. See the Supplemental Information section for a list of insignificant activities. An emission source is any point at a facility which emits, or is capable of emitting, an air contaminant into the atmosphere. The definition of an air contaminant is "any solid, liquid, gas, or vapor or any combination thereof. The following shall not be considered air contaminants: water vapor, oxygen, carbon dioxide, nitrogen, hydrogen, and inert gases." For sources under PSD review, GHGs must also be included.

    Make as many copies as necessary of the attached Emission Rate Table. **Complete a separate emission rate table** for each proposed operating scenario, using the same source number for each emission source.

    Facilities may submit, on a case-by-case basis, the information required on an emission rate table in an alternative format. The applicant should make a request for an alternative format before the required submittal date of the application in order to allow for modifications to the format, at the discretion of the DEQ, without delaying the application submittal.

    a. **STACK DATA:** The stack data is critical since computer modeling uses the stack data. The applicant should ensure that this information is accurate.

        i. **Emission Source No. (SN):** Point and Non-Point sources of air emissions should be given a two or three digit number preceded by "SN" (SN-01, SN-02...SN-999). Maintain the source numbers, if feasible, from the existing permit to identify the same sources in the new application.

        ii. **Date Installed, Date of Last Reconstruction or Date Modified:** Denote the initial year of installation of the equipment in question and, if applicable, the date of the last reconstruction or modification of the equipment.

            "Reconstruction" means the replacement of components of an existing facility to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new unit. (This definition is not used to determine whether a permit modification is required, only to determine the date of installation or modification for NSPS applicability determinations).

        iii. **Process Description:** Describe the process unit, which generates the emissions in the space provided (ex. Boiler, natural gas fired - 150 MMBtu/hr). The applicant will describe control equipment in a separate section of the table.

        iv. **SCC Code:** The EPA uses Source Classification Codes (SCCs) to classify different types of anthropogenic emissions activities. Each SCC represents a unique source category-specific process or function that emits an air pollutant. Refer to EPA websites for a complete up to date listing.

v. **Stack Height:** Denote the stack's height above the ground in feet to the nearest foot. If the emissions do not exit a stack (i.e., the emissions are non-point source or fugitive) indicate the height, above ground, where the emissions enter the atmosphere.

vi. **Stack Dimensions:** Denote the inside stack diameter in feet (for example, 3.25 ft. instead of 3'-3"). For non-circular stacks and area sources, report the dimensions in feet (for example, 2.5' x 1.0'). For non-point source or fugitive emissions, mark this item "Not Applicable" or "N/A".

vii. **Stack Gas Temperature:** Report the average temperature in degree Fahrenheit (ºF) of the stack gas as it enters the atmosphere. If the emissions are at ambient temperature, enter "ambient". Do not enter a numeric estimate of the ambient temperature.

viii. **Stack Gas Velocity:** Report the stack gas exit velocity in feet per second at the exit point of the stack. For non-point source or fugitive emissions, mark this item "Not Applicable" or "N/A".

ix. **Stack UTM Coordinates:** Report the Universal Transverse Mercator (UTM) zone and coordinates of the Stack to the nearest meter. The correct UTM Coordinates are critical for modeling purposes.

b. **CRITICAL OPERATING RATES:** The critical operating rates define the parameters used in drafting the permit. Listed parameters should be relevant to air emissions.

i. **Maximum Operating Hours:** Enter the proposed maximum operating hours per day, hours per month, and hours per year for the emission point. DEQ defines "Maximum Operating Hours" as 24 hrs/day, 730 hrs/mo, and 8,760 hrs/yr. Using this Maximum Operating Hours to calculate the Potential to Emit (PTE) for all sources is not required but it will reduce the facility/source recordkeeping requirements. If the applicant limits the hours of operation as a means of limiting potential to emit, the permit will limit the hours of operation by permit conditions. Monthly hours of operation may provide maximum flexibility for seasonal type operations or for back-up equipment.

ii. **PTE Limited by Hours of Operation:** Indicate if the emission calculations use the hours of operation to limit the annual potential emission. Mark "yes" or "no" in the appropriate box.

iii. **Maximum Heat Input Capacity:** Denote all heat input from fuel fired equipment associated with this process, if applicable.

iv. **Fuel Heat Value:** For each fuel, list the average heat value, as fired, in MMBtu per unit, if applicable.

v. **Fuel % Sulfur:** For processes that utilize fuels (except for pipeline quality natural gas), list the maximum sulfur content. If applicable, identify the maximum sulfur content in the process description. The permit may limit the fuel sulfur content by permit conditions.

c. **MAXIMUM PRODUCTION/OPERATION RATES:**

i. Using a separate line for each intermediate and/or finished product removed from the process, list the maximum production rates proposed for the source. Using a separate line for each intermediate or raw material, and each solid, liquid, or gaseous fuel, list the maximum feed rates (process weight rates) proposed for the source. Use the same units (gallons, pounds, cubic feet, etc.) for annual as for hourly operating rates. If the permittee uses an operation or production rate below the maximum capability of the equipment to limit the potential to emit, the permit may limit operation to these operating rates by permit conditions. These rates should be in the units normally used by the facility to quantify usage (i.e. paint measured in gallons). Hourly throughput maximums are **rates that are never to be exceeded**. The applicant must provide the

rates even if the permittee is not proposing to limit potential to emit through production/throughput limitations; however, if the applicant adequately demonstrates the production/throughput rates have not been relied upon to limit potential to emit, these rates will not be reflected as permit conditions.

ii. **Emission Rates Limited by Maximum Production/Throughput Rates:** Indicate if the hourly or annual emission rates are limited by the proposed maximum hourly or annual production/throughput rates by answering "yes" or "no".

d. **AIR EMISSIONS INFORMATION:** This information deals directly with the emissions of air pollutants. The applicant must identify and quantify all regulated air pollutants emitted in significant quantities from the source. AP-42 or other EPA recognized documents contain the types of pollutants and approximate emission factors for many types of sources. The applicant must provide supporting calculations for the numbers listed in this section of the emission rate table. The permit application must contain an explanation of the method used to calculate the emission rates. Calculations should reference the source of all data used to determine air emissions. The applicant should provide a manufacturer Material Safety Data Sheet or other manufacturer/vendor data, which indicates the volatile organic compounds (VOC) or hazardous air pollutant (HAP) content in weight percent, and which supports the emission rate calculations, for each material that contains VOCs or HAPs.

i. **Pollutants:** The applicant must list all regulated air pollutants emitted from the source in this column. The most common pollutants are particulate matter (PM), particulate matter less than 10 microns in diameter (PM_{10}), Particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOCs), carbon monoxide (CO), and nitrogen oxides (NO_x). The applicant should list methane separately from non-methane VOCs. If the applicant emits other air contaminants from the source, such as acetone, ammonia, the applicant must identify and quantify each air contaminant. Designate air contaminants as state regulated pollutants. Do not denote water vapor, carbon dioxide, oxygen, and nitrogen.

Note on $PM_{2.5}$: $PM_{2.5}$ emission are only required only if a specific limit is requested or needed to limit $PM_{2.5}$. If so, include in this table and provide calculations. Otherwise, specific $PM_{2.5}$ limits will not be included in the permit for the source.

ii. **Emissions LB/HR:** Denote the maximum (not average) lb/hr for each pollutant. Round up this value to the nearest tenth or report two significant digits for criteria pollutants and should not be rounded for other pollutants. Enter "0" if the pollutant is not emitted. This value must be consistent with the maximum proposed hourly operating rate. If the maximum is not used, additional record keeping maybe required.

iii. **Emissions TPY:** Denote the total tons per year (tpy) for each pollutant (this value does not always correspond directly to the maximum hourly emission rates. In those cases where the two values do not directly correspond, the supporting calculations should clearly denote the reason for the discrepancy). Round this value up to the nearest tenth or report two significant digits for criteria pollutants. Do not round for other pollutants. This value may be limited by hours of operation limits or by throughput/production limits. If this value indicates less than continuous operation at maximum operating rates, the permittee should clearly denote in the supporting calculations the factors (i.e. production limits, or hour of operation limits, etc). used to limit the emission rates. The permit will reflect the limits in the permit conditions. If the facility is proposing to operate on a continuous basis, the applicant should calculate the annual emissions based upon 8,760 hours per year of operation. Enter "0" if the pollutant is not emitted.

iv. **Regulations:** The following is a list of state and federal air pollution regulations that may be applicable to a source. Other regulations may also apply.

A. Standards of Performance for New Stationary Sources (NSPS)
B. National Emission Standards for Hazardous Air Pollutants (NESHAP)
C. State Implementation Plan (SIP)
D. Arkansas Air Pollution Control Code (Code)
E. Prevention of Significant Deterioration (PSD)
F. New Source Review (NSR)
G. "N/A" if the pollutant is not emitted.

v. **Control Equipment:** Describe any pollution control equipment (cyclone, baghouse, scrubber, afterburner, etc.). Also, indicate the critical operating parameters of the control equipment (minimum scrubbing liquor flow for scrubbers, minimum temperature for afterburner, etc.). Complete the control equipment operating parameters form for each control device.

vi. **Manufacturer and Model Number:** The manufacturer's name and model number of the control equipment must be included in the Emission Rate Table.

vii. **Percent Control Efficiency:** Indicate the control efficiency of the air pollution control equipment for the pollutant in question.

44. **HAP Emission Rate Tables:** The applicant must complete a Hazardous Air Pollutant (HAP) Emission Rate Table form for each emission source capable of emitting HAPs. The applicant must complete a separate HAP Emission Rate Table for each emission source. Some listed HAPs are general names for groups of compounds. In such case, list the actual emitted compound.

The emission source number, the year installed or last modified, the process description and SCC should correspond to the information provided on the Emission Rate Table.

Provide the pollutant name and CAS number for each pollutant emitted from the source. The Supplemental Information section contains CAS numbers for HAPs. List all HAPs separately.

Emissions lb/hour. Denote the maximum (not average) emission rate in pounds per hour (lb/hr) for all HAPs. Do not round this value. List emission rates for each HAP separately. Provide supporting calculations for each emission rate. The Supplemental Information section provides example calculations.

Emissions Tons/Year. Denote the total tons per year emitted. Do not round this value. List emission rates for each HAP separately. The hours of operation limitations or throughput/production limitations can limit the emissions. If this value indicates less than continuous operation at maximum operating rates, the permittee should clearly denote in the supporting calculations the factors (i.e. production limits, or hour of operation limits) used to limit the emission rates. The permit will reflect these limits in the permit conditions.

Emission Control Equipment. Describe any pollution control equipment (cyclone, baghouse, scrubber, afterburner, etc.). Also, indicate the critical operating parameters of the control equipment (minimum scrubbing liquor flow for scrubbers, minimum temperature for afterburner). Complete the control equipment operating parameters form for each control device.

% Control Efficiency: Report the control efficiency used in emission calculation for the air pollution control equipment for the pollutant in question.

45. **Insignificant Activities:** Insignificant activities are sources that emit pollutants but need not be included as specific sources in the permit with specific conditions. There are two types, Group A and Group B insignificant activities. These can be found in Regulation 18 or Rule 19 (identical). Group A activities are required to be included in the permit application and are evaluated by the Division of Environmental Quality. These will appear in a final permit as a list of Insignificant Activities. Activities

listed in Appendix B of these regulations do not generally need to be quantified or included in permit applications.

Group A Insignificant Activities cannot have any Federal requirements, require any recordkeeping or in general have conditions that need to be tracked. The entire source must be insignificant, i.e. you cannot have part of a source's emissions insignificant and another part subject to permitting.

Attach completed forms for the insignificant activities type at your facility and attach calculations for categories that have a maximum emission rate limit. For the insignificant activities categories that have a maximum emission rate limit, the tpy sum cannot exceed the maximum emission rate.

Equipment Forms

46. **Internal Combustion Engine Summary:** Complete this form for all internal combustion engines that are not considered insignificant. This, in part, will be used to determine applicability of federal rules to the engines.

47. **Control Equipment Operating Parameters:**

    a. Identify the emission point number with which the control equipment is associated. This number should correspond to the number provided on the emission rate table.

    b. Provide a separate form for each piece of control equipment.

    c. Provide manufacturer information to support the information provided. This includes not only the manufacturer information for the physical piece of control equipment, but also the manufacturer information on parameters such as scrubber media, required media flow rate, etc.

    d. For control equipment not listed on the Control Equipment Operating Parameters Form, provide any information deemed relevant to the proper operation of the control equipment and provide manufacturer information associated with the control equipment.

    e. The applicant may supply additional information proposing appropriate monitoring parameters for the subject control equipment. This information is in addition to the required information. This information will be considered during the technical review, but the Division of Environmental Quality will make the final determination for parameters to monitor control equipment based on all information submitted.

48. **Storage Tank Summary:** Complete the Storage Tank Information Form for all storage tanks emitting regulated pollutants that are not Insignificant Activities.

49. **Equipment Specifications:** Include engineering drawings, operating parameters, manufacturer's specifications, and other information as requested for each piece of equipment directly related to the emission of pollutants to the atmosphere. It is not necessary to submit specifications for equipment not relevant to air pollution.

Additional Information

50. **Continuous Emissions Monitoring Systems and Testing:** List all Continuous Emissions Monitoring Systems (CEMS) currently used for determining compliance with regulatory requirements. Additionally, list all existing periodic testing requirements currently used or proposed for determining compliance with regulatory requirements (for example, EPA Method 7E to be used for testing NO_x emissions annually). This list should contain the appropriate source number for which the CEMS and/or periodic testing requirements pertain, the pollutant(s) for which the requirement is applicable, the required testing frequency or reporting frequency, and any other relevant information.

51. **Suggested Specific Conditions:** Attach any proposed specific conditions.

52. **Other Information:** Attach any other information that you would like to submit for review.

53. **Modeling Information:** DEQ will perform screening modeling for Criteria and Non-Criteria Air Pollutants. Attach any information that you would like to submit regarding modeling.

Certifications

Certifications must be signed by a responsible official meeting the definition cited in the form. If a person other than those meeting the definition is delegated responsibility, a copy of such delegation authority must be included with the certification.

For paper submissions: Do not modify the wording of the statements. Should you choose to modify these statements, your permit application will be delayed for legal review of the statements. The applicable certifications as shown in the following table must be attached to the submission.

Certification Type	Applicability
Certification of Application Form	Required for all permit and registration applications
Certification of Compliance Form	• Required for all Title V applications • Compliance Plan and Schedule must also be attached if applicable
Certification of Minor Modification Form	Required for Title V Minor Modifications

For online submissions: The certification statements are included in the Additional Certifications section and the Signing step of the ePortal application. By certifying the online application, the applicant is certifying that they have read and agree to all certifications. The responsible official must either certify the application by being the person who submits the application with their electronic signature or they must certify the application using the follow-on hard copy Certification of ePortal Submission form after someone else submits the submission. The hard copy certification form is available under the download/export button on the Submission Overview page after submitting the submission. Alternately, you will be given a link to the hard copy certification form in the Form Submitted email.

Copies and Mailing Instructions

For paper submissions: Compile copies of your registration or permit application as follows:

Type of Application	# of Copies Needed
Registration	Original Only
Minor Source	Original Only
Title V/Major	Original Only
PSD	Original and Email FLM Form
Confidential Applications	• One Complete Application with all information, including confidential and • One non-confidential original with confidential information redacted

Mail the completed registration or permit application and required attachments to the address below. An electronic copy of any or all of the application is not required, but is helpful in processing your permit. Please include with your paper application or email to AirPermits@adeq.state.ar.us. Applications cannot be submitted electronically except through ePortal.

Mail permit applications to:	Division of Environmental Quality Attention: Air Permits Branch 5301 Northshore Drive North Little Rock, AR 72118
Our street address for other delivery purposes is:	5301 Northshore Drive North Little Rock, AR 72118
Phone Number:	(501) 682-0744
Fax Number:	(501) 682-0880
Our Email Address is:	AirPermits@adeq.state.ar.us

For online submissions: Please do **not** mail in a hardcopy of the application. The only items needed to be mailed for an online submission is the Certification of ePortal Submission form if the responsible official did not submit the submission using their electronic signature.

Appendices

Checklists

Review the checklists below for items to include in your registration or permit application.

Application for Registrations

1. Complete the following:

☐"Air Application for Registrations, Minor Source Permits, or Title V Permits" Form

Skip the following sections:

- Title V Information
- Prevention of Significant Deterioration (PSD) Information
- Site Information
- Certification of Compliance (Paper Submission)
- Certification of Minor Modification (Paper Submission)

2. Attach the following items unless a valid reason for not applicable has been selected:

☐Certificate of Good Standing (Foreign)
☐Disclosure Statement
☐Delegation of Authority Letter
☐Detailed NSPS and NESHAP/MACT Requirements
☐Process Description
☐Process Flow Diagram
☐Emission Calculations
☐Equipment Specifications
☐Certification of Application Form (Paper Submission)

3. Check to make sure:

Online Submissions	**Paper Submissions**
☐Someone Meeting the Responsible Official Definition Submits the ePortal Submission with Their Electronic Signature **OR** Submits the Signed Original Certification of ePortal Submission Form	☐You Submit the Original application and It is Signed by Someone Meeting the Responsible Official Definition

Application for Minor Source Permits

1. Complete the following:

☐"Air Application for Registrations, Minor Source Permits, or Title V Permits" Form

Skip the following sections:

- Registration Information
- Title V Information
- Prevention of Significant Deterioration (PSD) Information
- Certification of Compliance (Paper Submission)
- Certification of Minor Modification (Paper Submission)

2. Attach the following items unless a valid reason for not applicable has been selected:

Initial Permit (New or Existing Facility), Significant Modifications, or De Minimis

☐Certificate of Good Standing (Foreign)
☐Disclosure Statement (Only Required for Initial Permits)
☐Delegation of Authority Letter
☐Detailed NSPS and NESHAP/MACT Requirements
☐Process Description
☐Process Flow Diagram
☐Plot Plan
☐USGS Area Map
☐Property Description (Only Required for Initial Permits)
☐Emission Calculations
☐Emission Rate Tables
☐HAP Emission Rate Tables
☐Insignificant Activities Form and Calculations
☐Internal Combustion Engine Summary Form
☐Control Equipment Operating Parameters Form(s)
☐Storage Tank Summary Form
☐Equipment Specifications
☐Certification of Application Form (Paper Submission)

Administrative Amendment

☐Emission Calculations
☐Insignificant Activities Form and Calculations
☐Storage Tank Summary Form
☐Certification of Application Form (Paper Submission)

3. Check to make sure:

Online Submissions	**Paper Submissions**
☐Someone Meeting the Responsible Official Definition Submits the ePortal Submission with Their Electronic Signature **OR** Submits the Signed Original Certification of ePortal Submission Form	☐You Submit the Original application and It is Signed by Someone Meeting the Responsible Official Definition

Application for Title V Permits

1. Complete the following:

☐"Air Application for Registrations, Minor Source Permits, or Title V Permits" Form
Skip the Registration Information section

2. Attach the following items unless a valid reason for not applicable has been selected:

Initial Permit (New or Existing Facility), Renewal, Significant Modifications, or Minor Modifications

☐Certificate of Good Standing (Foreign)
☐Disclosure Statement (Only Required for Initial Permits and Renewals)
☐Delegation of Authority Letter
☐Compliance Plan and Schedule
☐Compliance Assurance Monitoring Plan
☐§ 112(g) Application
☐§ 112(r) Compliance Plan
☐Acid Rain Forms
☐Cross-State Air Pollution Rule/Transport Rule Form
☐Detailed NSPS and NESHAP/MACT Requirements
☐Process Description
☐Process Flow Diagram
☐Plot Plan
☐USGS Area Map
☐Property Description (Only Required for Initial Permits and Renewals)
☐Emission Calculations
☐Emission Rate Tables
☐HAP Emission Rate Tables
☐Insignificant Activities Form and Calculations
☐Internal Combustion Engine Summary Form
☐Control Equipment Operating Parameters Form(s)
☐Storage Tank Summary Form
☐Equipment Specifications
☐Certification of Application Form (Paper Submission)
☐Certification of Compliance Form (Paper Submission)
☐Certification of Minor Modification Form (Paper Minor Modifications Only)
If PSD, Include the following:
☐Request for Applicability of Class I Area Modeling Analysis Form
☐BACT Analysis
☐Other PSD Analyses

Administrative Amendment

☐Emission Calculations
☐Insignificant Activities Form and Calculations
☐Storage Tank Summary Form
☐Certification of Application Form (Paper Submission)
☐Certification of Compliance Form (Paper Submission)

3. Check to make sure:

Online Submissions	**Paper Submissions**
☐Someone Meeting the Responsible Official Definition Submits the ePortal Submission with Their Electronic Signature **OR** Submits the Signed Original Certification of ePortal Submission Form	☐You Submit the Original application and It is Signed by Someone Meeting the Responsible Official Definition

Minor Modification/De Minimis Checklist

FACILITY'S INFORMATION **Facility** **Mailing Address** **Mailing City, State Zip**
CONTACT: Official Name Official Phone
DATE RECEIVED: Date Application Received
AFIN: AFIN CURRENT PERMIT NO.: Active Permit
RESPONSE DUE BEFORE: **Date Response Due**

DESCRIBE PROPOSED CHANGE(S):

Description of Request

Recommended Action

☐ ACCEPT	☐ DENY *PROCESS AS MODIFICATION*	☐ DENY *TERMINATE REVIEW*
☐ OTHER *EXPLAIN*		

#	*Yes*	*No*	**If yes to any questions, the proposed change most likely does not qualify as a minor mod or de minimis application.**
1	☐	☐	Are General Information Forms incomplete, missing or unsigned?
2	☐	☐	Is the certificate of application missing or not signed by a responsible official?
3	☐	☐	Is this a minor mod application **and** the certificate of compliance missing or not signed by a responsible official?
4	☐	☐	Is this a minor mod application **and** the certification by a responsible official that the proposed minor modification meets the criteria for use of minor mod procedures and a request to use such procedures missing?
5	☐	☐	Is any of the following missing that is necessary for, or would be changed by this de minimis/minor modification: emission rate tables, calculations, control equipment operating parameters, process flow diagram, and/or process description? *(if yes, please specify which one(s))*
6	☐	☐	Is any of the following missing that is necessary for this de minimis/minor modification: a plot plan, a USGS Map and/or a legal description? *(if yes, please specify which one(s))*
7	☐	☐	Is this a minor mod application **and** the compliance plan and schedule missing or incomplete? *Compliance plans are only required for Title V applications. The compliance plan is not the same as the compliance certification.*
8	☐	☐	Is the application deficient and additional information required? *(if yes specify)*
9	☐	☐	Is this a minor mod application and the differences between the sum of the proposed permitted rates for all emissions units and the sum of previously permitted emission rates for all units greater than 75 tpy CO; 40 tpy NO_2, SO_2, or VOC; 25 tpy PM; 15 tpy $PM_{10;}$ 10 tpy direct $PM_{2.5}$ or 0.5 tpy lead? *See notes below*
10	☐	☐	Is this a De Minimis application **and** are the increases in emissions greater than those above, and impacts greater than De Minimis modeling thresholds of: CO 500 ug/m^3 8-hour; NO_2 10 ug/m^3 annual; PM_{10} 8 ug/m^3 24-hour; $PM_{2.5}$ 2 ug/m^3 24-hour; SO_2 18 ug/m^3 24-hour; Lead 0.1 ug/m^3 3-month? *This would be in lieu of the tpy De Minimis limits. Normally this demonstration would need to be submitted by the applicant.*

#	*Yes*	*No*	**If yes to any questions, the proposed change most likely does not qualify as a minor mod or de minimis application.**
11	☐	☐	Would the proposed change involve an increase in the permitted emission rates without a corresponding physical change or change in the method of operation at the source? *The source must actually make a modification. They cannot fail a stack test and ask for their emission limit to be raised through the Minor Mod/De Minimis process. An increase in production over permitted levels is a change in the method of operation and is eligible for Minor Mod/De Minimis*
12	☐	☐	Would the proposed change result in a violation of the Clean Air Act? *It is unlikely that any modification which meets the other change requirements will violate any provision of the CAA.*
13	☐	☐	Is the facility major for PSD, is the project considered a "modification" under the PSD definition and will there be a "significant emission increase" in emissions as determined by PSD regulations. *Are all three of these items true? See 40 CFR 52.21 for details.*
14	☐	☐	Would the change require a Title I netting procedure to determine eligibility? *This is when all contemporaneous increases and decreases are considered in evaluating if PSD review is required. This <u>is not</u> the same as calculating the net change in emissions at the emission source.*
15	☐	☐	Would the proposed change seek to change a case-by-case determination of an emission limitation established pursuant to BACT, **112(g), 112(i)(5), 112(j), or 111(d) of the Clean Air Act?**
16	☐	☐	Would the proposed change violate provisions of Rule 19?
17	☐	☐	Would the proposal change a permit term, condition, or limit that a source has assumed to avoid an applicable requirement to which the source would otherwise be subject? *If someone takes a limit to stay out of PSD, Title V, or a MACT, they cannot change the limit through the Minor Mod/De Minimis change procedures*
18	☐	☐	Would the proposed change be a significant change or relaxation to existing testing, monitoring, reporting, or recordkeeping requirements? *Determination of a significant change will be made on a case-by-case basis. In general, this should be done by determining why the existing monitoring, testing, or reporting was required and deciding if the new proposal will accomplish the same result. It should be the applicant's responsibility to demonstrate that the proposed change is not significant.*
19	☐	☐	Is more than minimal judgment required? *In general, the following situations will require more than minimal judgment to determine eligibility:* • *If a facility does not pass the PAER or the PAIL,* • *If more than standard (i.e. AERMOD) modeling is required,* • *If previous modeling indicates the facility is already within 95% of the NAAQS,* • *If there are serious concerns about the emission rate estimates which cannot be resolved.*
20	☐	☐	Is the Minor Mod/De Minimis part of a larger change at the source or multiple applications that would otherwise disqualify the change from Minor Mod/De Minimis approval?
21	☐	☐	On the de minimis/minor mod letter response due date, will any of this applicant's Arkansas facilities have any unpaid past due fees (for any division)? *This includes any facilities under the same entity, i.e. corporation, owner, etc. Do not deny for this reason until the day of the response due date unless extenuating circumstances.*

Detail any approval conditions or reasons for denial in letter

Notes on determining emission changes:

- A new unit will have a "previously permitted emission rate" of zero
- An unpermitted existing unit at facility will have a "previously permitted emission rate" of zero
- An Insignificant Activity moving to a permitted source will have a "previously permitted emission rate" as indicated in the permit application, Statement of Basis or other information showing it was insignificant.
- A permitted unit without an existing emission rate for $PM_{2.5}$ will have a "previously permitted emission rate" that has the same ratio of $PM_{2.5}/PM_{10}$ as the unit will have in the modified permit.

Example Emission Calculations

Note: These calculations are **examples only**. The values used in these examples should not be used to prepare your permit application.

Facility: Wood Furniture Manufacturing Operation

SN-01: Wood Working Operations - controlled by cyclone

From AP-42 Table 10.4.1:

Emission factor for sander dust from cyclone = 5.0 lb/hr

Emission factor for other wood working operations from cyclone = 2.0 lb/hr

Therefore, for sawing and sanding operations routed to a common cyclone, the particulate matter (wood dust) emission factor is 7.0 lb/hr.

PM/PM_{10} = 7.0 lb/hr
PM/PM_{10} = 7.0 lb/hr x 8760 hr/yr x ton/2000 lb = 30.7 tons/yr

The permit applicant wants to limit the hours of operation for this process in order to reduce the annual permitted emissions. The following information is used to determine maximum annual emissions. The wood working operations operate two 8-hour shifts per day and occasionally on Saturdays. The plant closes for two (2) weeks per year for vacation. Based on this information, the maximum operating hours for the wood working processes are 16 hrs/day, 6 days/wk, and 50 wks/yr. However, the wood working processes never operate more than 400 hours per month. The applicant requests the permit to limit operating hours to 400 hours per month for the wood working operations at the plant.

PM/PM_{10} = 7.0 lb/hr x 400 hr/mo x 12 mo/yr x ton/2000 lb = 16.8 tons/yr

SN-02: Spray Paint Booth

Based on equipment specifications for the paint booth, the throughput capacity is 6 gallons of paint per hour. Two enamel coatings and a clear coat are applied (at different times) in this booth. The VOC content of the coatings are indicated in the Physical Data section of the MSDS in "Percent Volatile **by Volume**." In order to perform the VOC calculations the percent volatile **by weight** must be obtained from the manufacturer of the coatings. The percent volatile **by weight** of the black enamel coating as stated in the manufacturer's additional information is 70%. The percent volatile **by weight** of the white enamel coating as stated in the manufacturer's additional information is 66%. The percent volatile **by weight** of the clear coat as stated in the manufacturer's additional information is 74%. In order to have maximum flexibility, the applicant assumes that each paint is sprayed at the maximum throughput capacity of 6 gallons per hour rate to determine the "Worst Case" hourly emission rate for each Hazardous Air Pollutant (HAP). Based on historic data, the applicant knows that no more than 750 gallons of paint are applied monthly. The applicant requests to be limited to 750 gallons per month of paint. All information below can be found in the Hazardous Ingredients section, the Physical Data section, or the manufacturer's attachment to the MSDS sheets provided below.

Black Enamel: Weight per gallon = 8.22 pounds

VOC: Wt% = 70%
VOC = 8.22 lb/gal (6 gal/hr) (0.70) = 34.524 lb/hr. ROUND TO 34.6 lb/hr.
VOC = 8.22 lb/gal (750 gal/mo) (0.70) (12 mo/yr) (ton/2000 lb) = 25.9 tons/yr.

Xylene: Wt% = 18%

8.22 lb/gal (6 gal/hr) (0.18) = 8.8776 lb/hr.
8.22 lb/gal (750 gal/mo) (0.18) (12 mo/yr) (ton/2000 lb) = 6.6582 tons/yr.

Toluene: Wt% = 10%
8.22 lb/gal (6 gal/hr) (0.10) = 4.932 lb/hr.
8.22 lb/gal (750 gal/mo) (0.10) (12 mo/yr) (ton/2000 lb) = 3.699 tons/yr.

MIBK: Wt% = 6%

8.22 lb/gal (6 gal/hr) (0.06) = 2.9592 lb/hr.
8.22 lb/gal (750 gal/mo) (0.06) (12 mo/yr) (ton/2000 lb) = 2.2194 tons/yr.

White Enamel: Weight per gallon = 8.64 pounds

VOC: Wt% = 66%
VOC = 8.64 lb/gal (6 gal/hr) (0.66) = 34.2144 lb/hr. ROUND TO 34.3 lb/hr.
VOC = 8.64 lb/gal (750 gal/mo) (0.66) (12 mo/yr) (ton/2000 lb) = 25.7 tons/yr.

Xylene: Wt% = 6%

8.64 lb/gal (6 gal/hr) (0.06) = 3.1104 lb/hr.
8.64 lb/gal (750 gal/mo) (0.06) (12 mo/yr) (ton/2000 lb) = 2.3328 tons/yr.

Toluene: Wt% = 18%

8.64 lb/gal (6 gal/hr) (0.18) = 9.3312 lb/hr.
8.64 lb/gal (750 gal/mo) (0.18) (12 mo/yr) (ton/2000 lb) = 6.9984 tons/yr.

MIBK: Wt% = 23%

8.64 lb/gal (6 gal/hr) (0.23) = 11.9232 lb/hr.
8.64 lb/gal (750 gal/mo) (0.23) (12 mo/yr) (ton/2000 lb) = 8.9424 tons/yr.

Clear Coat: Weight per gallon = 7.48 pounds

VOC: Wt% = 74%
VOC = 7.48 lb/gal (6 gal/hr) (0.74) = 33.2112 lb/hr. ROUND TO 33.3 lb/hr.
VOC = 7.48 lb/gal (750 gal/mo) (0.74) (12 mo/yr) (ton/2000 lb) = 25.0 tons/yr.

Xylene: Wt% = 26%

7.48 lb/gal (6 gal/hr) (0.26) = 11.6688 lb/hr.
7.48 lb/gal (750 gal/mo) (0.26) (12 mo/yr) (ton/2000 lb) = 8.7516 tons/yr.

MIBK: Wt% = 35%

7.48 lb/gal (6 gal/hr) (0.35) = 15.708 lb/hr.
7.48 lb/gal (750 gal/mo) (0.35) (12 mo/yr) (ton/2000 lb) = 11.781 tons/yr.

Worst Case VOC and HAPs from the three coatings above

VOC: 34.6 lb/hr and 25.9 tons/yr (Black Enamel)

Xylene: 11.6688 lb/hr and 8.7516 tons/yr (Clear Coat)

Toluene: 9.3312 lb/hr and 6.9984 tons/yr (White Enamel)

MIBK: 15.708 lb/hr and 11.781 tons/yr (Clear Coat)

SN-03: Drying Oven

A 15 million Btu/hr (MMBtu/hr) natural gas fired drying oven is used to dry and cure the paints after application in the spray paint booth. Natural gas has a fuel heat value of approximately 1000 scf/MMBtu. From AP-42 Tables 1.4-1, 1.4-2, and 1.4-3, the emission factors for natural gas combustion from sources <100 million Btu/hr heat input are:

Emission factor for PM is 7.6 lb/10^6 scf of natural gas.

Emission factor for SO_2 is 0.6 lb/10^6 scf of natural gas.

Emission factor for VOC is 5.5 lb/10^6 scf of natural gas.

Emission factor for CO is 84 lb/10^6 scf of natural gas.

Emission factor for NO_x is 100 lb/10^6 scf of natural gas.

PM/PM_{10} = 15 MMBtu/hr x 1000 scf/MMBtu x 7.6 lb/MM scf = 0.2 lb/hr
PM/PM_{10} = 0.2 lb/hr x 8760 hr/yr x ton/2000 lb = 0.9 tons/yr

SO_2 = 15 MMBtu/hr x 1000 scf/MMBtu x 0.6 lb/MM scf = 0.01 lb/hr (Round to 0.1 lb/hr)
SO_2 = 0.1 lb/hr x 8760 hr/yr x ton/2000 lb = 0.5 tons/yr

VOC = 15 MMBtu/hr x 1000 scf/MMBtu x 5.5 lb/MM scf = 0.1 lb/hr
VOC = 0.1 lb/hr x 8760 hr/yr x ton/2000 lb = 0.5 tons/yr

CO = 15 MMBtu/hr x 1000 scf/MMBtu x 84 lb/MM scf = 1.3 lb/hr
CO = 1.3 lb/hr x 8760 hr/yr x ton/2000 lb = 5.7 tons/yr

NO_x = 15 MMBtu/hr x 1000 scf/MMBtu x 100 lb/MM scf = 1.5 lb/hr
NO_x = 1.5 lb/hr x 8760 hr/yr x ton/2000 lb = 6.6 tons/yr

Example Emission Rate Tables

EMISSION RATE TABLE

EMISSION POINT NO.	YEAR INSTALLED	YEAR LAST MODIFIED	PROCESS DESCRIPTION (Descriptive Name)	SCC	STACK HEIGHT (FT)	INSIDE STACK DIMENSIONS (FT)	STACK GAS TEMP. (ºF)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES	
									HORIZ. (E)	VERT. (N)
SN-01	1987		Wood Working Operations		12	1	Ambient	10	559708	3850967

MAXIMUM OPERATING HOURS			ARE THE HOURS OF OPERATION OF THE UNIT RELIED UPON TO LIMIT THE ANNUAL POTENTIAL EMISSIONS?	HEAT INPUT CAPACITY (Boiler, Dryer, Furnace, Etc.) MMBTU/HR	FUEL HEAT VALUE MMBTU/UNIT	FUEL % S
HRS/DAY	HRS/MTH	HRS/YR				
16	400		YES ☑ NO ☐	N/A	N/A	N/A

PROPOSED MAXIMUM PRODUCTION/OPERATION RATES					ARE THE HOURLY PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED HOURLY MAXIMUM EMISSION RATES?
ANNUAL	MONTHLY	HOURLY	UNITS (gal, lb, ft, etc.)	RAW MATERIAL, PRODUCT, FUEL, ETC.	YES ☐ NO ☐
					ARE THE ANNUAL PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED ANNUAL MAXIMUM EMISSION RATES?
					YES ☐ NO ☐

POLLUTANT (Complete the HAPs EMISSION RATE TABLE for all HAP emissions)	PROPOSED MAXIMUM EMISSIONS		Regulations (NSPS, PSD, etc.)	EMISSION CONTROL EQUIPMENT		
	LBS/HOUR	TONS/YEAR		TYPE (Scrubber, Cyclone, Etc.)	EQUIPMENT MANUFACTURER AND MODEL NUMBER(S)	% CONTROL EFFICIENCY
PM	7.0	16.8	Air Code	Cyclone		
PM_{10}	7.0	16.8	SIP	Cyclone		
$PM_{2.5}$*	0	0	N/A			
SO_2	0	0	N/A			
VOC	0	0	N/A			
CO	0	0	N/A			
NO_x	0	0	N/A			
Other (list)	0	0	N/A			

*$PM_{2.5}$ is the same as PM_{10} unless a different emission rate is listed here.

EMISSION RATE TABLE

EMISSION POINT NO.	YEAR INSTALLED	YEAR LAST MODIFIED	PROCESS DESCRIPTION (Descriptive Name)	SCC	STACK HEIGHT (FT)	INSIDE STACK DIMENSIONS (FT)	STACK GAS TEMP. (ºF)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES	
									HORIZ. (E)	VERT. (N)
SN-02	1987	1988	Paint Booth		12	1.4	Ambient	27	559708	3850967

MAXIMUM OPERATING HOURS			ARE THE HOURS OF OPERATION OF THE UNIT RELIED UPON TO LIMIT THE ANNUAL POTENTIAL EMISSIONS?	HEAT INPUT CAPACITY (Boiler, Dryer, Furnace, Etc.) MMBTU/HR	FUEL HEAT VALUE MMBTU/UNIT	FUEL % S
HRS/DAY	HRS/MTH	HRS/YR				
12	200	2,400	YES ☐ NO ☑	N/A	N/A	N/A

PROPOSED MAXIMUM PRODUCTION/OPERATION RATES					ARE THE HOURLY PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED HOURLY MAXIMUM EMISSION RATES?
ANNUAL	MONTHLY	HOURLY	UNITS (gal, lb, ft, etc.)	RAW MATERIAL, PRODUCT, FUEL, ETC.	YES ☐ NO ☑
9,000	750	6	Gallons	Paint Products	
					ARE THE ANNUAL PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED ANNUAL MAXIMUM EMISSION RATES?
					YES ☑ NO ☐

POLLUTANT (Complete the HAPs EMISSION RATE TABLE for all HAP emissions)	PROPOSED MAXIMUM EMISSIONS		Regulations (NSPS, PSD, etc.)	EMISSION CONTROL EQUIPMENT		
	LBS/HOUR	TONS/YEAR		TYPE (Scrubber, Cyclone, Etc.)	EQUIPMENT MANUFACTURER AND MODEL NUMBER(S)	% CONTROL EFFICIENCY
PM	0	0	N/A	Particulate Filter	Clean Screen-2PF	N/A (filter controls particulate overspray- not VOC emissions)
PM_{10}	0	0	N/A			
$PM_{2.5}$*	0	0	N/A			
SO_2	34.6	25.9	SIP			
VOC	0	0	N/A			
CO	0	0	N/A			
NO_x	0	0	N/A			
Other (list)						

*$PM_{2.5}$ required only if a specific limit is requested/needed.

HAPs EMISSION RATE TABLE

EMISSION POINT NO.	YEAR INSTALLED	YEAR LAST MODIFIED	PROCESS DESCRIPTION (Descriptive Name)	SCC
SN-02	1987	1988	Paint Booth	

POLLUTANT NAME & CAS #	PROPOSED MAXIMUM EMISSIONS			EMISSION CONTROL EQUIPMENT	
(Complete for each HAP pollutant. NOTE: Supporting calculations and documentation must be provided for these emission values.)	LBS/HOUR	TONS/YEAR	Regulation	Type	% Control Efficiency
Xylene (1331-20-7)	11.67	8.76	NESHAP JJ	None	None
Toluene (108-88-3)	9.34	7.00	NESHAP JJ	None	None
MIBK (108-10-1)	15.71	11.79	NESHAP JJ	None	None
Highest Single HAP emission rate		11.79			
Total of All HAPs emission rate		27.55			

EMISSION RATE TABLE

EMISSION POINT NO.	YEAR INSTALLED	YEAR LAST MODIFIED	PROCESS DESCRIPTION (Descriptive Name)	SCC	STACK HEIGHT (FT)	INSIDE STACK DIMENSIONS (FT)	STACK GAS TEMP. (ºF)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES	
									HORIZ. (E)	VERT. (N)
SN-03	1988		Drying Oven		12.5	1.0	200	50	559708	3850967

MAXIMUM OPERATING HOURS			ARE THE HOURS OF OPERATION OF THE UNIT RELIED UPON TO LIMIT THE ANNUAL POTENTIAL EMISSIONS?	HEAT INPUT CAPACITY (Boiler, Dryer, Furnace, Etc.) MMBTU/HR	FUEL HEAT VALUE MMBTU/UNIT	FUEL % S
HRS/DAY	HRS/MTH	HRS/YR				
12	200	2,400	YES ☐ NO ☑	15	1000 MMBTU/SCF	N/A

PROPOSED MAXIMUM PRODUCTION/OPERATION RATES					ARE THE HOURLY PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED HOURLY MAXIMUM EMISSION RATES?
ANNUAL	MONTHLY	HOURLY	UNITS (gal, lb, ft, etc.)	RAW MATERIAL, PRODUCT, FUEL, ETC.	YES ☐ NO ☑
36,000	3,000	15	1,000 scf	Natural Gas	
					ARE THE ANNUAL PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED ANNUAL MAXIMUM EMISSION RATES?
					YES ☐ NO ☑

POLLUTANT (Complete the HAPs EMISSION RATE TABLE for all HAP emissions)	PROPOSED MAXIMUM EMISSIONS		Regulations (NSPS, PSD, etc.)	EMISSION CONTROL EQUIPMENT		
	LBS/HOUR	TONS/YEAR		TYPE (Scrubber, Cyclone, Etc.)	EQUIPMENT MANUFACTURER AND MODEL NUMBER(S)	% CONTROL EFFICIENCY
PM	0.2	0.9	Air Code	None	N/A	N/A
PM_{10}	0.2	0.9	SIP	None	N/A	N/A
$PM_{2.5}$*	0.1	0.5	SIP	None	N/A	N/A
SO_2	0.1	0.5	SIP	None	N/A	N/A
VOC	1.3	5.7	SIP	None	N/A	N/A
CO	1.5	6.6	SIP	None	N/A	N/A
NO_x	0	0	N/A			
Other (list)						

*$PM_{2.5}$ required only if a specific limit is requested/needed.

CAS NUMBER	CHEMICAL NAME
75-07-0	Acetaldehyde
60-35-5	Acetamide
75-05-8	Acetonitrile
98-86-2	Acetophenone
53-96-3	2-Acetylaminoflourene
107-02-8	Acrolein
79-06-1	Acrylamide
79-10-7	Acrylic acid
107-13-1	Acrylonitrile
107-05-1	Allyl chloride
92-67-1	4-Aminobiphenyl
62-53-3	Aniline
90-04-0	o-Anisidine
1332-21-4	Asbestos
71-43-2	Benzene (including benzene from gasoline)
92-87-5	Benzidine
98-07-7	Benzotrichloride
100-44-7	Benzyl chloride
92-52-4	Biphenyl
117-81-7	Bis(2-ethylhexyl)phthalate (DEHP)
542-88-1	Bis(chloromethyl) ether
75-25-2	Bromoform
106-99-0	1,3-Butadiene
156-62-7	Calcium cyanamide

CAS NUMBER	CHEMICAL NAME
133-06-2	Captan
63-25-2	Carbaryl
75-15-0	Carbon disulfide
56-23-5	Carbon tetrachloride
463-58-1	Carbonyl sulfide
120-80-9	Catechol
133-90-4	Chloramben
57-74-9	Chlordane
7782-50-5	Chlorine
79-11-8	Chloroacetic acid
532-27-4	2-Chloroacetophenone
108-90-7	Chlorobenzene
510-15-6	Chlorobenzilate
67-66-3	Chloroform
107-30-2	Chloromethyl methyl ether
126-99-8	Chloroprene
1319-77-3	Cresols/Cresylic acid (mixed isomers)
95-48-7	o-Cresol
108-39-4	m-Cresol
106-44-5	p-Cresol
98-82-8	Cumene
94-75-7	2,4-D (2,4-Dichlorophenoxyacetic Acid) (including salts and esters)
2-55-9	DDE (1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene)
334-88-3	Diazomethane
132-64-9	Dibenzofuran

CAS NUMBER	CHEMICAL NAME
96-12-8	1,2-Dibromo-3-chloropropane
84-74-2	Dibutyl phthalate
106-46-7	1,4-Dichlorobenzene
91-94-1	3,3'-Dichlorobenzidene
111-44-4	Dichloroethyl ether (Bis[2-chloroethyl]ether)
542-75-6	1,3-Dichloropropene
62-73-7	Dichlorvos
111-42-2	Diethanolamine
121-69-7	N,N-Dimethylaniline
64-67-5	Diethyl sulfate
119-90-4	3,3'-Dimethoxybenzidine
60-11-7	4-Dimethylaminoazobenzene
119-93-7	3,3'-Dimethylbenzidine
79-44-7	Dimethylcarbamoyl chloride
68-12-2	N,N-Dimethylformamide
57-14-7	1,1-Dimethylhydrazine
131-11-3	Dimethyl phthalate
77-78-1	Dimethyl sulfate
534-52-1	4,6-Dinitro-o-cresol (including salts)
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
123-91-1	1,4-Dioxane (1,4-Diethyleneoxide)
122-66-7	1,2-Diphenylhydrazine
106-89-8	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106-88-7	1,2-Epoxybutane
140-88-5	Ethyl acrylate

CAS NUMBER	CHEMICAL NAME
100-41-4	Ethylbenzene
51-79-6	Ethyl carbamate (Urethane)
75-00-3	Ethyl chloride (Chloroethane)
106-93-4	Ethylene dibromide (Dibromoethane)
107-06-2	Ethylene dichloride (1,2-Dichloroethane)
107-21-1	Ethylene glycol
151-56-4	Ethyleneimine (Aziridine)
75-21-8	Ethylene oxide
96-45-7	Ethylene thiourea
75-34-3	Ethylidene dichloride (1,1-Dichloroethane)
50-00-0	Formaldehyde
76-44-8	Heptachlor
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadine
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
822-06-0	Hexamethylene diisocyanate
680-31-9	Hexamethylphosphoramide
110-54-3	Hexane
302-01-2	Hydrazine
7647-01-0	Hydrochloric acid (Hydrogen Chloride [gas only])
7664-39-3	Hydrogen fluoride (Hydrofluoric acid)
123-31-9	Hydroquinone
78-59-1	Isophorone
58-89-9	Lindane (1,2,3,4,5,6-Hexachlorocyclyhexane [all stero isomers])

CAS NUMBER	CHEMICAL NAME
108-31-6	Maleic anhydride
67-56-1	Methanol
72-43-5	Methoxychlor
74-83-9	Methyl bromide (Bromomethane)
74-87-3	Methyl chloride (Chloromethane)
71-55-6	Methyl chloroform (1,1,1-Trichloroethane)
60-34-4	Methylhydrazine
74-88-4	Methyl iodide (Iodomethane)
108-10-1	Methyl isobutyl ketone (Hexone)
624-83-9	Methyl isocyanate
80-62-6	Methyl methacrylate
1634-04-4	Methyl tert-butyl ether
101-14-4	4,4'-Methylenebis(2-chloroaniline)
75-09-2	Methylene chloride (Dichloromethane)
101-68-8	4,4'-Methylenediphenyl diisocyanate (MDI)
101-77-9	4,4'-Methylenedianiline
91-20-3	Naphthalene
98-95-3	Nitrobenzene
92-93-3	4-Nitrobiphenyl
100-02-7	4-Nitrophenol
79-46-9	2-Nitropropane
684-93-5	N-Nitroso-N-methylurea
62-75-9	N-Nitrosodimethylamine
59-89-2	N-Nitrosomorpholine
56-38-2	Parathion
82-68-8	Pentachloronitrobenzene (Quintobenzene)

CAS NUMBER	CHEMICAL NAME
87-86-5	Pentachlorophenol
108-95-2	Phenol
106-50-3	p-Phenylenediamine
75-44-5	Phosgene
7803-51-2	Phosphine
7723-14-0	Phosphorus
85-44-9	Phthalic anhydride
1336-36-3	Polychlorinated biphenyls (Aroclors)
1120-71-4	1,3-Propane sultone
57-57-8	beta-Propiolactone
123-38-6	Propionaldehyde
114-26-1	Propoxur (Baygon)
78-87-5	Propylene dichloride (1,2-Dichloropropane)
75-56-9	Propylene oxide
75-55-8	1,2-Propylenimine (2-Methylaziridine)
91-22-5	Quinoline
106-51-4	Quinone (p-Benzoquinone)
100-42-5	Styrene
96-09-3	Styrene oxide
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79-34-5	1,1,2,2-Tetrachloroethane
127-18-4	Tetrachloroethylene (Perchloroethylene)
7550-45-0	Titanium tetrachloride
108-88-3	Toluene
95-80-7	Toluene-2,4-diaminie
584-84-9	2,4-Toluene diisocyanate

CAS NUMBER	CHEMICAL NAME
95-53-4	o-Toluidine
8001-35-2	Toxaphene (chlorinated camphene)
120-82-1	1,2,4-Trichlorobenzene
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
121-44-8	Triethylamine
1582-09-8	Trifluralin
540-84-1	2,2,4-Trimethylpentane
108-05-4	Vinyl acetate
593-60-2	Vinyl bromide
75-01-4	Vinyl chloride
75-35-4	Vinylidene chloride (1,1-Dichloroethylene)
1330-20-7	Xylene (mixed isomers)
95-47-6	o-Xylene
108-38-3	m-Xylene
106-42-3	p-Xylene
0	Antimony Compounds[1]
0	Arsenic Compounds (inorganic including arsine)[1]
0	Beryllium Compounds[1]
0	Cadmium Compounds[1]
0	Chromium Compounds[1]
0	Cobalt Compounds[1]
0	Coke Oven Emissions
0	Cyanide Compounds[1]

CAS NUMBER	CHEMICAL NAME
0	Glycol Ethers[1,3]
0	Lead Compounds[1]
0	Manganese Compounds[1]
0	Mercury Compounds[1]
0	Fine mineral fibers[1]
0	Nickel Compounds[1]
0	Polycyclic Organic Matter[1]
0	Radionuclides (including radon)[1]
0	Selenium Compounds[1]

NOTE: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e. antimony, arsenic, etc.) as part of that chemical's infrastructure.

[1]X'CN where X'= H' or any other group where a formal dissociation may occur. For example KCN or Ca(CN)2.

[2]Includes mono- and diethers of ethylene glycol, diethylene glycol and triethylene glycol R-(OCH2CH)n-OR' where

n = 1, 2, or 3

R = alkyl C7 or less; or

R = phenyl or alkyl substituted phenyl;

R= = H or alkyl C7 or less; or

OR= consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.

[3]Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) having a fiber diameter less than 3.5 μm and possessing an aspect ratio (fiber length divided by fiber diameter) greater than 3.

[4]Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocyclic compounds, with two or more fused rings, at least one of which is benzoid (i.e., containing six carbon atoms and is aromatic) in structure. Polycyclic Organic Matter is a mixture or organic compounds containing one or more of these polycyclic aromatic chemicals that include dioxins and furans. Polycyclic Organic Matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization, distillation, or processing of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels. The Administrator may delineate, by test method, what is included in polycyclic organic matter.

[5]A type of atom that spontaneously undergoes radioactive decay.

Glycol Ethers

On November 21, 2003 (68FR65648), the EPA proposed to remove the compound ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol) (Chemical Abstract Service (CAS) No. 111-76-2) from the group of glycol ethers. On November 29, 2004 (69FR69320) this proposal was made final.

On January 12, 1999 (64FR1780), the EPA proposed to modify the definition of glycol ethers to exclude surfactant alcohol ethoxylates and their derivatives (SAED). On August 2, 2000 (65FR47342), the EPA published the final action. This action deletes each individual compound in a group called the surfactant alcohol ethoxylates and their derivatives (SAED) from the glycol ethers category in the list of hazardous air pollutants (HAP) established by

section 112(b)(1) of the Clean Air Act (CAA). Under section 112(b)(3)(D) of the CAA, EPA may delete specific substances from certain listed categories, including glycol ethers. To implement this action, EPA is revising the definition of glycol ethers to exclude the deleted compounds.

List Of Non-VOC Hydrocarbons

"Volatile organic compounds" or **"VOC"** means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.

This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity:

acetone;
methane;
ethane;
methylene chloride (dichloromethane);
1,1,1- trichloroethane (methyl chloroform);
tetrachloroethylene (perchloroethylene);
1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
trichlorofluoromethane (CFC-11);
dichlorodifluoromethane (CFC-12);
chlorodifluoromethane (HCFC-22);
trifluoromethane (HFC-23);
1,2-dichloro 1,1, 2, 2-tetrafluoroethane (CFC-114);
chloropentafluoroethane (CFC-115);
1,1,1-trifluoro 2,2-dichloroethane (HCFC-123);
1,1,1,2-tetrafluoroethane (HFC-134a);
1,1-dichloro 1-fluoroethane (HCFC-141b);
1-chloro 1,1-difluoroethane (HCFC-142b);
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
pentaflurorethane (HFC-125);
1,1,2,2-tetrafluoroethane (HFC-134);
1,1,1-trifluoroethane (HFC-143a);
1,1-difluoroethane (HFC-152a);
parachlorobenzotrifluoride (PCBTF);
cyclic, branched, or linear completely methylated siloxanes;
3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
difluoromethane (HFC-32);
ethylfluoride (HFC-161);
1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
1,1,2,2,3-pentafluoropropane (HFC-245ca);
1,1,2,3,3-pentafluoropropane (HFC 245ea);
1,1,1,2,3-pentafluoropropane (HFC-245eb);
1,1,1,3,3-pentafluoropropane (HFC-245fa);
1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
1,1,1,3,3-pentafluorobutane (HFC-365mfc);
chlorofluoromethane (HCFC-31);
1 chloro-1-fluoroethane (HCFC-151a);
1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);

1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$ or HFE-7100);
2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane
($(CF_3)_2CFCF_2OCH_3$);
1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$ or HFE 7200);
2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane
($(CF_3)_2CFCF_2OC_2H_5$);
methyl acetate;
1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-$C_3F_7OCH_3$ or HFE-7000);
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane
(HFE-7500)
1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea);
methyl formate ($HCOOCH_3$)
1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300);
and perfluorocarbon compounds which fall into these classes:

(1) cyclic, branched, or linear, completely fluorinated alkanes;

(2) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

(3) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

(4) sulfur containing perfluorocarbons with no saturations and with sulfur bonds only to carbon and fluorine.

Insignificant Activities List

The following types of activities or emissions are deemed insignificant on the basis of size, emission rate, production rate, or activity. Certain of these listed activities include qualifying statements intended to exclude many similar activities. By such listing, the Division of Environmental Quality exempts certain sources or types of sources from the requirements to obtain a permit or plan under this regulation. Listing in this part has no effect on any other law to which the activity may be subject. Any activity for which a state or federal applicable requirement applies (such as NSPS, NESHAP, or MACT) is not insignificant, even if this activity meets the criteria below.

Group A

The following emission units, operations, or activities must either be listed as insignificant or included in the permit application as sources to be permitted. The listing of insignificant sources does not necessarily mean that the emissions from these sources must be quantified.

1. Fuel burning equipment with a design rate less than 10 MMBtu per hour, provided that the aggregate air pollutant specific emissions from all such units listed as insignificant do not exceed 5 tons per year (tpy) of any combination of HAPs, 75,000 tpy carbon dioxide, and 10 tpy of any other air pollutant.
2. Storage tanks less than or equal to 250 gallons storing organic liquids having a true vapor pressure less than or equal to 3.5 psia, provided that the aggregate air pollutant specific emissions from all such liquid storage tanks listed as insignificant do not exceed 5 tpy of any combination of HAPs and 10 tpy of any other air pollutant.
3. Storage tanks less than or equal to 10,000 gallons storing organic liquids having a true vapor pressure less than or equal to 0.5 psia, provided that the aggregate air pollutant specific emissions from all such liquid storage tanks listed as insignificant do not exceed 5 tpy of any combination of HAPs and 10 tpy of any other air pollutant.
4. Caustic storage tanks that contain no VOCs.
5. Emissions from laboratory equipment/vents used exclusively for routine chemical or physical analysis for quality control or environmental monitoring purposes provided that the aggregate air pollutant specific emissions from all such equipment/vents considered A-2 insignificant do not exceed 5 tpy of any combination of HAPs and 10 tpy of any other air pollutant.
6. Non-commercial water washing operations of empty drums less than or equal to 55 gallons with less than three percent of the maximum container volume of material.
7. Welding or cutting equipment related to manufacturing activities that do not result in aggregate emissions of HAPs in excess of 0.1 tpy.
8. Containers of less than or equal to 5 gallons in capacity that do not emit any detectable VOCs or HAPs when closed. This includes filling, blending, or mixing of the contents of such containers by a retailer.
9. Equipment used for surface coating, painting, dipping, or spraying operations, provided the material used contains no more than 0.4 lb/gal VOCs, no hexavalent chromium, and no more than 0.1 tpy of all other HAPs.
10. Non-production equipment approved by the Division of Environmental Quality, used for waste treatability studies or other pollution prevention programs provided that the emissions are less than 10 tpy of any air pollutant regulated under this regulation or less than 2 tpy of a single HAP or 5 tpy of any combination of HAPs.[1]
11. Operation of groundwater remediation wells, including emissions from the pumps and collection activities provided that the emissions are less than 10 tpy of any pollutant regulated under this

regulation or less than 2 tpy of a single HAP or 5 tpy of any combination of HAPs. This does not include emissions from air-stripping or storage.

12. Emergency use generators, boilers, or other fuel burning equipment that is of equal or smaller capacity than the primary operating unit, cannot be used in conjunction with the primary operating unit, and does not emit or have the potential to emit regulated air pollutants in excess of the primary operating unit and not operated more than 90 days a year. This does not apply to generators which provide electricity to the distribution grid.

13. Other activities for which the facility demonstrates that no enforceable permit conditions are necessary to insure compliance with any applicable law or regulation provided that the emissions are less than 75,000 tpy carbon dioxide, 1 tpy of a single HAP or 2.5 tpy of any combination of HAPs, or 5 tpy of any other air pollutant regulated under this regulation. These emission limits apply to the sum of all activities listed under this group.

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[1]The treatability study or pollution prevention program must be approved separately. The activity creating the emissions must also be determined to be insignificant as discussed in the introduction to this group.

Group B

The following emission units, operations, or activities need not be included in a permit application:

1. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under Title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emissions from loading racks or fueling operations covered under any applicable federal requirements.

2. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.

3. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

4. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.

5. Consumer use of office equipment and products, not including commercial printers or business primarily involved in photographic reproduction.

6. Janitorial services and consumer use of janitorial products.

7. Internal combustion engines used for landscaping purposes.

8. Laundry activities, except for dry-cleaning and steam boilers.

9. Bathroom/toilet emissions.

10. Emergency (backup) electrical generators at residential locations.

11. Tobacco smoking rooms and areas.

12. Blacksmith forges.

13. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.

14. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such

activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.[1]

15. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface-coating or products.

16. Portable electrical generators that can be "moved by hand" from one location to another.[2]

17. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.

18. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.[3]

19. Air compressors and pneumatically operated equipment, including hand tools.

20. Batteries and battery charging stations, except at battery manufacturing plants.

21. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.[4]

22. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and no volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

23. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.

24. Drop hammers or presses for forging or metalworking.

25. Equipment used exclusively to slaughter animals, but not including other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

26. Vents from continuous emissions monitors and other analyzers.

27. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

28. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.

29. Lasers used only on metals and other materials which do not emit HAPs in the process.

30. Consumer use of paper trimmers/binders.

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[1]Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

[2]"Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

[3]Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing, soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

[4]Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

31. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
32. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.
33. Laser trimmers using dust collection to prevent fugitive emissions.
34. Bench-scale laboratory equipment used for physical or chemical analysis not including lab fume hoods or vents.
35. Routine calibration and maintenance of laboratory equipment or other analytical instruments.
36. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
37. Hydraulic and hydrostatic testing equipment.
38. Environmental chambers not using hazardous air pollutant gases.
39. Shock chambers, humidity chambers, and solar simulators.
40. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
41. Process water filtration systems and demineralizers.
42. Demineralized water tanks and demineralizer vents.
43. Boiler water treatment operations, not including cooling towers.
44. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.
45. Oxygen scavenging (de-aeration) of water.
46. Ozone generators.
47. Fire suppression systems.
48. Emergency road flares.
49. Steam vents and safety relief valves.
50. Steam leaks.
51. Steam cleaning operations.
52. Steam and microwave sterilizers.
53. Site assessment work to characterize waste disposal or remediation sites.
54. Miscellaneous additions or upgrades of instrumentation.
55. Emissions from combustion controllers or combustion shutoff devices but not combustion units itself.
56. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units of such vehicles (i.e. antifreeze, fuel additives).
57. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.
58. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.

59. Residential wood heaters, cookstoves, or fireplaces.

60. Barbecue equipment or outdoor fireplaces used in connection with any residence or recreation.

61. Log wetting areas and log flumes.

62. Periodic use of pressurized air for cleanup.

63. Solid waste dumpsters.

64. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.

65. Natural gas odoring activities unless the Division of Environmental Quality determines that emissions constitute air pollution.

66. Emissions from engine crankcase vents.

67. Storage tanks used for the temporary containment of materials resulting from an emergency reporting to an unanticipated release.

68. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.

69. Mixers, blenders, roll mills, or calendars for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.

70. The storage, handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to the equipment only).

71. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.

72. Tall oil soap storage, skimming, and loading.

73. Water heaters used strictly for domestic (non-process) purposes.

74. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.

75. Agricultural operations, including onsite grain storage, not including IC engines or grain elevators.

76. The following natural gas and oil exploration production site equipment: separators, dehydration units, natural gas fired compressors, and pumping units. This does not include compressors located on natural gas transmission pipelines.

Global Warming Potential Factors

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Chemical-Specific GWPs			
Carbon dioxide	124-38-9	CO_2	1
Methane	74-82-8	CH_4	[a]25
Nitrous oxide	10024-97-2	N_2O	[a]298
Fully Fluorinated GHGs			
Sulfur hexafluoride	2551-62-4	SF_6	[a]22,800
Trifluoromethyl sulphur pentafluoride	373-80-8	SF_5CF_3	17,700
Nitrogen trifluoride	7783-54-2	NF_3	17,200
PFC-14 (Perfluoromethane)	75-73-0	CF_4	[a]7,390
PFC-116 (Perfluoroethane)	76-16-4	C_2F_6	[a]12,200
PFC-218 (Perfluoropropane)	76-19-7	C_3F_8	[a]8,830
Perfluorocyclopropane	931-91-9	$C\text{-}C_3F_6$	17,340
PFC-3-1-10 (Perfluorobutane)	355-25-9	C_4F_{10}	[a]8,860
PFC-318 (Perfluorocyclobutane)	115-25-3	$C\text{-}C_4F_8$	[a]10,300
PFC-4-1-12 (Perfluoropentane)	678-26-2	C_5F_{12}	[a]9,160
PFC-5-1-14 (Perfluorohexane, FC-72)	355-42-0	C_6F_{14}	[a]9,300
PFC-6-1-12	335-57-9	C_7F_{16}; $CF_3(CF_2)_5CF_3$	[b]7,820
PFC-7-1-18	307-34-6	C_8F_{18}; $CF_3(CF_2)_6CF_3$	[b]7,620
PFC-9-1-18	306-94-5	$C_{10}F_{18}$	7,500
PFPMIE (HT-70)	NA	$CF_3OCF(CF_3)CF_2OCF_2OCF_3$	10,300
Perfluorodecalin (cis)	60433-11-6	$Z\text{-}C_{10}F_{18}$	[b]7,236
Perfluorodecalin (trans)	60433-12-7	$E\text{-}C_{10}F_{18}$	[b]6,288
Saturated Hydrofluorocarbons (HFCs) With Two or Fewer Carbon-Hydrogen Bonds			
HFC-23	75-46-7	CHF_3	[a]14,800
HFC-32	75-10-5	CH_2F_2	[a]675
HFC-125	354-33-6	C_2HF_5	[a]3,500
HFC-134	359-35-3	$C_2H_2F_4$	[a]1,100
HFC-134a	811-97-2	CH_2FCF_3	[a]1,430

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
HFC-227ca	2252-84-8	$CF_3CF_2CHF_2$	[b]2640
HFC-227ea	431-89-0	C_3HF_7	[a]3,220
HFC-236cb	677-56-5	$CH_2FCF_2CF_3$	1,340
HFC-236ea	431-63-0	CHF_2CHFCF_3	1,370
HFC-236fa	690-39-1	$C_3H_2F_6$	[a]9,810
HFC-329p	375-17-7	$CHF_2CF_2CF_2CF_3$	[b]2360
HFC-43-10mee	138495-42-8	$CF_3CFHCFHCF_2CF_3$	[a]1,640
Saturated Hydrofluorocarbons (HFCs) With Three or More Carbon-Hydrogen Bonds			
HFC-41	593-53-3	CH_3F	[a]92
HFC-143	430-66-0	$C_2H_3F_3$	[a]353
HFC-143a	420-46-2	$C_2H_3F_3$	[a]4,470
HFC-152	624-72-6	CH_2FCH_2F	53
HFC-152a	75-37-6	CH_3CHF_2	[a]124
HFC-161	353-36-6	CH_3CH_2F	12
HFC-245ca	679-86-7	$C_3H_3F_5$	[a]693
HFC-245cb	1814-88-6	$CF_3CF_2CH_3$	[b]4620
HFC-245ea	24270-66-4	$CHF_2CHFCHF_2$	[b]235
HFC-245eb	431-31-2	$CH_2FCHFCF_3$	[b]290
HFC-245fa	460-73-1	$CHF_2CH_2CF_3$	1,030
HFC-263fb	421-07-8	$CH_3CH_2CF_3$	[b]76
HFC-272ca	420-45-1	$CH_3CF_2CH_3$	[b]144
HFC-365mfc	406-58-6	$CH_3CF_2CH_2CF_3$	794
Saturated Hydrofluoroethers (HFEs) and Hydrochlorofluoroethers (HCFEs) With One Carbon-Hydrogen Bond			
HFE-125	3822-68-2	CHF_2OCF_3	14,900
HFE-227ea	2356-62-9	$CF_3CHFOCF_3$	1,540
HFE-329mcc2	134769-21-4	$CF_3CF_2OCF_2CHF_2$	919
HFE-329me3	428454-68-6	$CF_3CFHCF_2OCF_3$	[b]4,550
1,1,1,2,2,3,3-Heptafluoro-3-(1,2,2,2-tetrafluoroethoxy)-propane	3330-15-2	$CF_3CF_2CF_2OCHFCF_3$	[b]6,490

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Saturated HFEs and HCFEs With Two Carbon-Hydrogen Bonds			
HFE-134 (HG-00)	1691-17-4	CHF_2OCHF_2	6,320
HFE-236ca	32778-11-3	$CHF_2OCF_2CHF_2$	[b]4,240
HFE-236ca12 (HG-10)	78522-47-1	$CHF_2OCF_2OCHF_2$	2,800
HFE-236ea2 (Desflurane)	57041-67-5	$CHF_2OCHFCF_3$	989
HFE-236fa	20193-67-3	$CF_3CH_2OCF_3$	487
HFE-338mcf2	156053-88-2	$CF_3CF_2OCH_2CF_3$	552
HFE-338mmz1	26103-08-2	$CHF_2OCH(CF_3)_2$	380
HFE-338pcc13 (HG-01)	188690-78-0	$CHF_2OCF_2CF_2OCHF_2$	1,500
HFE-43-10pccc (H-Galden 1040x, HG-11)	E1730133	$CHF_2OCF_2OC_2F_4OCHF_2$	1,870
HCFE-235ca2 (Enflurane)	13838-16-9	CHF_2OCF_2CHFCl	[b]583
HCFE-235da2 (Isoflurane)	26675-46-7	$CHF_2OCHClCF_3$	350
HG-02	205367-61-9	$HF_2C\text{-}(OCF_2CF_2)_2\text{-}OCF_2H$	[b]3,825
HG-03	173350-37-3	$HF_2C\text{-}(OCF_2CF_2)_3\text{-}OCF_2H$	[b]3,670
HG-20	249932-25-0	$HF_2C\text{-}(OCF_2)_2\text{-}OCF_2H$	[b]5,300
HG-21	249932-26-1	$HF_2C\text{-}OCF_2CF_2OCF_2OCF_2O\text{-}CF_2H$	[b]3,890
HG-30	188690-77-9	$HF_2C\text{-}(OCF_2)_3\text{-}OCF_2H$	[b]7,330
1,1,3,3,4,4,6,6,7,7,9,9,10,10,12,12,13,13,15,15-eicosafluoro-2,5,8,11,14-Pentaoxapentadecane	173350-38-4	$HCF_2O(CF_2CF_2O)_4CF_2H$	[b]3,630
1,1,2-Trifluoro-2-(trifluoromethoxy)-ethane	84011-06-3	$CHF_2CHFOCF_3$	[b]1,240
Trifluoro(fluoromethoxy)methane	2261-01-0	CH_2FOCF_3	[b]751
Saturated HFEs and HCFEs With Three or More Carbon-Hydrogen Bonds			
HFE-143a	421-14-7	CH_3OCF_3	756
HFE-245cb2	22410-44-2	$CH_3OCF_2CF_3$	708
HFE-245fa1	84011-15-4	$CHF_2CH_2OCF_3$	286
HFE-245fa2	1885-48-9	$CHF_2OCH_2CF_3$	659
HFE-254cb2	425-88-7	$CH_3OCF_2CHF_2$	359
HFE-263fb2	460-43-5	$CF_3CH_2OCH_3$	11
HFE-263m1; R-E-143a	690-22-2	$CF_3OCH_2CH_3$	[b]29

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
HFE-347mcc3 (HFE-7000)	375-03-1	$CH_3OCF_2CF_2CF_3$	575
HFE-347mcf2	171182-95-9	$CF_3CF_2OCH_2CHF_2$	374
HFE-347mmy1	22052-84-2	$CH_3OCF(CF_3)_2$	343
HFE-347mmz1 (Sevoflurane)	28523-86-6	$(CF_3)_2CHOCH_2F$	[c]216
HFE-347pcf2	406-78-0	$CHF_2CF_2OCH_2CF_3$	580
HFE-356mec3	382-34-3	$CH_3OCF_2CHFCF_3$	101
HFE-356mff2	333-36-8	$CF_3CH_2OCH_2CF_3$	[b]17
HFE-356mmz1	13171-18-1	$(CF_3)_2CHOCH_3$	27
HFE-356pcc3	160620-20-2	$CH_3OCF_2CF_2CHF_2$	110
HFE-356pcf2	50807-77-7	$CHF_2CH_2OCF_2CHF_2$	265
HFE-356pcf3	35042-99-0	$CHF_2OCH_2CF_2CHF_2$	502
HFE-365mcf2	22052-81-9	$CF_3CF_2OCH_2CH_3$	[b]58
HFE-365mcf3	378-16-5	$CF_3CF_2CH_2OCH_3$	11
HFE-374pc2	512-51-6	$CH_3CH_2OCF_2CHF_2$	557
HFE-449s1 (HFE-7100) Chemical blend	163702-07-6	$C_4F_9OCH_3$	297
	163702-08-7	$(CF_3)_2CFCF_2OCH_3$	
HFE-569sf2 (HFE-7200) Chemical blend	163702-05-4	$C_4F_9OC_2H_5$	59
	163702-06-5	$(CF_3)_2CFCF_2OC_2H_5$	
HG'-01	73287-23-7	$CH_3OCF_2CF_2OCH_3$	[b]222
HG'-02	485399-46-0	$CH_3O(CF_2CF_2O)_2CH_3$	[b]236
HG'-03	485399-48-2	$CH_3O(CF_2CF_2O)_3CH_3$	[b]221
Difluoro(methoxy)methane	359-15-9	CH_3OCHF_2	[b]144
2-Chloro-1,1,2-trifluoro-1-methoxyethane	425-87-6	CH_3OCF_2CHFCl	[b]122
1-Ethoxy-1,1,2,2,3,3,3-heptafluoropropane	22052-86-4	$CF_3CF_2CF_2OCH_2CH_3$	[b]61
2-Ethoxy-3,3,4,4,5-pentafluorotetrahydro-2,5-bis[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-furan	920979-28-8	$C_{12}H_5F_{19}O_2$	[b]56
1-Ethoxy-1,1,2,3,3,3-hexafluoropropane	380-34-7	$CF_3CHFCF_2OCH_2CH_3$	[b]23
Fluoro(methoxy)methane	460-22-0	CH_3OCH_2F	[b]13
1,1,2,2-Tetrafluoro-3-methoxy-propane; Methyl 2,2,3,3-tetrafluoropropyl ether	60598-17-6	$CHF_2CF_2CH_2OCH_3$	[b]0.5

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
1,1,2,2-Tetrafluoro-1-(fluoromethoxy)ethane	37031-31-5	$CH_2FOCF_2CF_2H$	[b]871
Difluoro(fluoromethoxy)methane	461-63-2	CH_2FOCHF_2	[b]617
Fluoro(fluoromethoxy)methane	462-51-1	CH_2FOCH_2F	[b]130
Fluorinated Formates			
Trifluoromethyl formate	85358-65-2	$HCOOCF_3$	[b]588
Perfluoroethyl formate	313064-40-3	$HCOOCF_2CF_3$	[b]580
1,2,2,2-Tetrafluoroethyl formate	481631-19-0	$HCOOCHFCF_3$	[b]470
Perfluorobutyl formate	197218-56-7	$HCOOCF_2CF_2CF_2CF_3$	[b]392
Perfluoropropyl formate	271257-42-2	$HCOOCF_2CF_2CF_3$	[b]376
1,1,1,3,3,3-Hexafluoropropan-2-yl formate	856766-70-6	$HCOOCH(CF_3)_2$	[b]333
2,2,2-Trifluoroethyl formate	32042-38-9	$HCOOCH_2CF_3$	[b]33
3,3,3-Trifluoropropyl formate	1344118-09-7	$HCOOCH_2CH_2CF_3$	[b]17
Fluorinated Acetates			
Methyl 2,2,2-trifluoroacetate	431-47-0	CF_3COOCH_3	[b]52
1,1-Difluoroethyl 2,2,2-trifluoroacetate	1344118-13-3	$CF_3COOCF_2CH_3$	[b]31
Difluoromethyl 2,2,2-trifluoroacetate	2024-86-4	$CF_3COOCHF_2$	[b]27
2,2,2-Trifluoroethyl 2,2,2-trifluoroacetate	407-38-5	$CF_3COOCH_2CF_3$	[b]7
Methyl 2,2-difluoroacetate	433-53-4	HCF_2COOCH_3	[b]3
Perfluoroethyl acetate	343269-97-6	$CH_3COOCF_2CF_3$	[b]2.1
Trifluoromethyl acetate	74123-20-9	CH_3COOCF_3	[b]2.0
Perfluoropropyl acetate	1344118-10-0	$CH_3COOCF_2CF_2CF_3$	[b]1.8
Perfluorobutyl acetate	209597-28-4	$CH_3COOCF_2CF_2CF_2CF_3$	[b]1.6
Ethyl 2,2,2-trifluoroacetate	383-63-1	$CF_3COOCH_2CH_3$	[b]1.3
Carbonofluoridates			
Methyl carbonofluoridate	1538-06-3	$FCOOCH_3$	[b]95
1,1-Difluoroethyl carbonofluoridate	1344118-11-1	$FCOOCF_2CH_3$	[b]27
Fluorinated Alcohols Other Than Fluorotelomer Alcohols			
Bis(trifluoromethyl)-methanol	920-66-1	$(CF_3)_2CHOH$	195
(Octafluorotetramethy-lene) hydroxymethyl group	NA	$X\text{-}(CF_2)_4CH(OH)\text{-}X$	73
2,2,3,3,3-Pentafluoropropanol	422-05-9	$CF_3CF_2CH_2OH$	42

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
2,2,3,3,4,4,4-Heptafluorobutan-1-ol	375-01-9	C_3F_7CH2OH	[b]25
2,2,2-Trifluoroethanol	75-89-8	CF_3CH_2OH	[b]20
2,2,3,4,4,4-Hexafluoro-1-butanol	382-31-0	$CF_3CHFCF_2CH_2OH$	[b]17
2,2,3,3-Tetrafluoro-1-propanol	76-37-9	$CHF_2CF_2CH_2OH$	[b]13
2,2-Difluoroethanol	359-13-7	CHF_2CH2OH	[b]3
2-Fluoroethanol	371-62-0	CH_2FCH_2OH	[b]1.1
4,4,4-Trifluorobutan-1-ol	461-18-7	$CF_3(CH_2)_2CH_2OH$	[b]0.05
Unsaturated Perfluorocarbons (PFCs)			
PFC-1114; TFE	116-14-3	$CF_2 = CF_2$; C_2F_4	[b]0.004
PFC-1216; Dyneon HFP	116-15-4	C_3F_6; $CF_3CF = CF_2$	[b]0.05
PFC C-1418	559-40-0	$c\text{-}C_5F_8$	[b]1.97
Perfluorobut-2-ene	360-89-4	$CF_3CF = CFCF_3$	[b]1.82
Perfluorobut-1-ene	357-26-6	$CF_3CF_2CF = CF_2$	[b]0.10
Perfluorobuta-1,3-diene	685-63-2	$CF_2 = CFCF = CF_2$	[b]0.003
Unsaturated Hydrofluorocarbons (HFCs) and Hydrochlorofluorocarbons (HCFCs)			
HFC-1132a; VF2	75-38-7	$C_2H_2F_2$, $CF_2 = CH_2$	[b]0.04
HFC-1141; VF	75-02-5	C_2H_3F, $CH_2 = CHF$	[b]0.02
(E)-HFC-1225ye	5595-10-8	$CF_3CF = CHF(E)$	[b]0.06
(Z)-HFC-1225ye	5528-43-8	$CF_3CF = CHF(Z)$	[b]0.22
Solstice 1233zd(E)	102687-65-0	$C_3H_2ClF_3$; $CHCl = CHCF_3$	[b]1.34
HFC-1234yf; HFO-1234yf	754-12-1	$C_3H_2F_4$; $CF_3CF = CH_2$	[b]0.31
HFC-1234ze(E)	1645-83-6	$C_3H_2F_4$; trans-CF_3CH = CHF	[b]0.97
HFC-1234ze(Z)	29118-25-0	$C_3H_2F_4$; cis-$CF_3CH = CHF$; $CF_3CH = CHF$	[b]0.29
HFC-1243zf; TFP	677-21-4	$C_3H_3F_3$, $CF_3CH = CH_2$	[b]0.12
(Z)-HFC-1336	692-49-9	$CF_3CH = CHCF_3(Z)$	[b]1.58
HFC-1345zfc	374-27-6	$C_2F_5CH = CH_2$	[b]0.09
Capstone 42-U	19430-93-4	$C_6H_3F_9$, $CF_3(CF_2)_3CH = CH_2$	[b]0.16
Capstone 62-U	25291-17-2	$C_8H_3F_{13}$, $CF_3(CF_2)_5CH =$	[b]0.11

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
		CH_2	
Capstone 82-U	21652-58-4	$C_{10}H_3F_{17}$, $CF_3(CF_2)_7CH = CH_2$	[b]0.09
Unsaturated Halogenated Ethers			
PMVE; HFE-216	1187-93-5	$CF_3OCF = CF_2$	[b]0.17
Fluoroxene	406-90-6	$CF_3CH_2OCH = CH_2$	[b]0.05
Fluorinated Aldehydes			
3,3,3-Trifluoro-propanal	460-40-2	CF_3CH_2CHO	[b]0.01
Fluorinated Ketones			
Novec 1230 (perfluoro (2-methyl-3-pentanone))	756-13-8	$CF_3CF_2C(O)CF (CF3)_2$	[b]0.1
Fluorotelomer Alcohols			
3,3,4,4,5,5,6,6,7,7,7-Undecafluoroheptan-1-ol	185689-57-0	$CF_3(CF_2)_4CH_2CH_2OH$	[b]0.43
3,3,3-Trifluoropropan-1-ol	2240-88-2	$CF_3CH_2CH_2OH$	[b]0.35
3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-Pentadecafluorononan-1-ol	755-02-2	$CF_3(CF_2)_6CH_2CH_2OH$	[b]0.33
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-Nonadecafluoroundecan-1-ol	87017-97-8	$CF_3(CF_2)_8CH_2CH_2OH$	[b]0.19
Fluorinated GHGs With Carbon-Iodine Bond(s)			
Trifluoroiodomethane	2314-97-8	CF_3I	[b]0.4
Other Fluorinated Compounds			
Dibromodifluoromethane (Halon 1202)	75-61-6	CBR_2F_2	[b]231
2-Bromo-2-chloro-1,1,1-trifluoroethane (Halon-2311/Halothane)	151-67-7	$CHBrClCF_3$	[b]41

Fluorinated GHG Group[d]	Global warming potential (100 yr.)
Default GWPs for Compounds for Which Chemical-Specific GWPs Are Not Listed Above	
Fully fluorinated GHGs	10,000
Saturated hydrofluorocarbons (HFCs) with 2 or fewer carbon-hydrogen bonds	3,700
Saturated HFCs with 3 or more carbon-hydrogen bonds	930
Saturated hydrofluoroethers (HFEs) and hydrochlorofluoroethers (HCFEs) with 1 carbon-hydrogen bond	5,700

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Saturated HFEs and HCFEs with 2 carbon-hydrogen bonds			2,600
Saturated HFEs and HCFEs with 3 or more carbon-hydrogen bonds			270
Fluorinated formates			350
Fluorinated acetates, carbonofluoridates, and fluorinated alcohols other than fluorotelomer alcohols			30
Unsaturated perfluorocarbons (PFCs), unsaturated HFCs, unsaturated hydrochlorofluorocarbons (HCFCs), unsaturated halogenated ethers, unsaturated halogenated esters, fluorinated aldehydes, and fluorinated ketones			1
Fluorotelomer alcohols			1
Fluorinated GHGs with carbon-iodine bond(s)			1
Other fluorinated GHGs			2,000

[a]The GWP for this compound was updated in the final rule published on November 29, 2013 [78 FR 71904] and effective on January 1, 2014.
[b]This compound was added to Table A-1 in the final rule published on December 11, 2014, and effective on January 1, 2015.
[c]The GWP for this compound was updated in the final rule published on December 11, 2014, and effective on January 1, 2015.
[d]For electronics manufacturing (as defined in §98.90), the term "fluorinated GHGs" in the definition of each fluorinated GHG group in §98.6 shall include fluorinated heat transfer fluids (as defined in §98.98), whether or not they are also fluorinated GHGs.
[79 FR 73779, Dec. 11, 2014]

*From Table A - 1 to Subpart A of 40 C.F.R. § 98

§ 68.130 List of substances.

(a) Regulated toxic and flammable substances under section 112(r) of the Clean Air Act are the substances listed in Tables 1, 2, 3, and 4. Threshold quantities for listed toxic and flammable substances are specified in the tables.

(b) The basis for placing toxic and flammable substances on the list of regulated substances are explained in the notes to the list.

Table 1 to § 68.130—List of Regulated Toxic Substances and Threshold Quantities for Accidental Release Prevention

[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Acrolein [2-Propenal]	107-02-8	5,000	b
Acrylonitrile [2-Propenenitrile]	107-13-1	20,000	b
Acrylyl chloride [2-Propenoyl chloride]	814-68-6	5,000	b
Allyl alcohol [2-Propen-l-ol]	107-18-6	15,000	b
Allylamine [2-Propen-l-amine]	107-11-9	10,000	b
Ammonia (anhydrous)	7664-41-7	10,000	a, b
Ammonia (conc 20% or greater)	7664-41-7	20,000	a, b
Arsenous trichloride	7784-34-1	15,000	b
Arsine	7784-42-1	1,000	b
Boron trichloride [Borane, trichloro-]	10294-34-5	5,000	b
Boron trifluoride [Borane, trifluoro-]	7637-07-2	5,000	b
Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro [oxybis [metane]]-, T-4-	353-42-4	15,000	b
Bromine	7726-95-6	10,000	a, b

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Carbon disulfide	75-15-0	20,000	b
Chlorine	7782-50-5	2,500	a, b
Chlorine dioxide [Chlorine oxide (ClO2)]	10049-04-4	1,000	c
Chloroform [Methane, trichloro-]	67-66-3	20,000	b
Chloromethyl ether [Methane, oxybis[chloro-]	542-88-1	1,000	b
Chloromethyl methyl ether [Methane, chloromethoxy-]	107-30-2	5,000	b
Crotonaldehyde [2-Butenal]	4170-30-3	20,000	b
Crotonaldehyde, (E)- [2-Butenal, (E)-]	123-73-9	20,000	b
Cyanogen chloride	506-77-4	10,000	c
Cyclohexylamine [Cyclohexanamine]	108-91-8	15,000	b
Diborane	19287-45-7	2,500	b
Dimethyldichlorosilane [Silane, dichlorodimethyl-]	75-78-5	5,000	b
1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-]	57-14-7	15,000	b
Epichlorohydrin [Oxirane, (chloromethyl)-]	106-89-8	20,000	b
Ethylenediamine [1,2-Ethanediamine]	107-15-3	20,000	b
Ethyleneimine [Aziridine]	151-56-4	10,000	b
Ethylene oxide [Oxirane]	75-21-8	10,000	a, b
Fluorine	7782-41-4	1,000	b
Formaldehyde (solution)	50-00-0	15,000	b

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Furan	110-00-9	5,000	b
Hydrazine	302-01-2	15,000	b
Hydrochloric acid (conc 37% or greater)	7647-01-0	15,000	d
Hydrocyanic acid	74-90-8	2,500	a, b
Hydrogen chloride (anhydrous) [Hydrochloric acid]	7647-01-0	5,000	a
Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]	7664-39-3	1,000	a, b
Hydrogen selenide	7783-07-5	500	b
Hydrogen sulfide	7783-06-4	10,000	a, b
Iron, pentacarbonyl- [Iron carbonyl (Fe(CO)5), (TB-5-11)-]	13463-40-6	2,500	b
Isobutyronitrile [Propanenitrile, 2-methyl-]	78-82-0	20,000	b
Isopropyl chloroformate [Carbonochloridic acid, 1-methylethyl ester]	108-23-6	15,000	b
Methacrylonitrile [2-Propenenitrile, 2-methyl-]	126-98-7	10,000	b
Methyl chloride [Methane, chloro-]	74-87-3	10,000	a
Methyl chloroformate [Carbonochloridic acid, methylester]	79-22-1	5,000	b
Methyl hydrazine [Hydrazine, methyl-]	60-34-4	15,000	b
Methyl isocyanate [Methane, isocyanato-]	624-83-9	10,000	a, b
Methyl mercaptan [Methanethiol]	74-93-1	10,000	b
Methyl thiocyanate [Thiocyanic acid, methyl ester]	556-64-9	20,000	b
Methyltrichlorosilane [Silane, trichloromethyl-]	75-79-6	5,000	b

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Nickel carbonyl	13463-39-3	1,000	b
Nitric acid (conc 80% or greater)	7697-37-2	15,000	b
Nitric oxide [Nitrogen oxide (NO)]	10102-43-9	10,000	b
Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide][1]	8014-95-7	10,000	e
Peracetic acid [Ethaneperoxoic acid]	79-21-0	10,000	b
Perchloromethylmercaptan [Methanesulfenyl chloride, trichloro-]	594-42-3	10,000	b
Phosgene [Carbonic dichloride]	75-44-5	500	a, b
Phosphine	7803-51-2	5,000	b
Phosphorus oxychloride [Phosphoryl chloride]	10025-87-3	5,000	b
Phosphorus trichloride [Phosphorous trichloride]	7719-12-2	15,000	b
Piperidine	110-89-4	15,000	b
Propionitrile [Propanenitrile]	107-12-0	10,000	b
Propyl chloroformate [Carbonochloridic acid, propylester]	109-61-5	15,000	b
Propyleneimine [Aziridine, 2-methyl-]	75-55-8	10,000	b
Propylene oxide [Oxirane, methyl-]	75-56-9	10,000	b
Sulfur dioxide (anhydrous)	7446-09-5	5,000	a, b
Sulfur tetrafluoride [Sulfur fluoride (SF4), (T-4)-]	7783-60-0	2,500	b
Sulfur trioxide	7446-11-9	10,000	a, b
Tetramethyllead [Plumbane, tetramethyl-]	75-74-1	10,000	b

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Tetranitromethane [Methane, tetranitro-]	509-14-8	10,000	b
Titanium tetrachloride [Titanium chloride (TiCl4) (T-4)-]	7550-45-0	2,500	b
Toluene 2,4-diisocyanate [Benzene, 2,4-diisocyanato-1-methyl-][1]	584-84-9	10,000	a
Toluene 2,6-diisocyanate [Benzene, 1,3-diisocyanato-2-methyl-][1]	91-08-7	10,000	a
Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-][1]	26471-62-5	10,000	a
Trimethylchlorosilane [Silane, chlorotrimethyl-]	75-77-4	10,000	b
Vinyl acetate monomer [Acetic acid ethenyl ester]	108-05-4	15,000	b

[1]The mixture exemption in § 68.115(b)(1) does not apply to the substance.

Note: Basis for Listing:

a Mandated for listing by Congress.

b On EHS list, vapor pressure 10 mmHg or greater.

c Toxic gas.

d Toxicity of hydrogen chloride, potential to release hydrogen chloride, and history of accidents.

e Toxicity of sulfur trioxide and sulfuric acid, potential to release sulfur trioxide, and history of accidents.

Table 2 to § 68.130—List of Regulated Toxic Substances and Threshold Quantities for Accidental Release Prevention

[CAS Number Order—77 Substances]

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
50-00-0	Formaldehyde (solution)	15,000	b
57-14-7	1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-]	15,000	b
60-34-4	Methyl hydrazine [Hydrazine, methyl-]	15,000	b
67-66-3	Chloroform [Methane, trichloro-]	20,000	b

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
74-87-3	Methyl chloride [Methane, chloro-]	10,000	a
74-90-8	Hydrocyanic acid	2,500	a, b
74-93-1	Methyl mercaptan [Methanethiol]	10,000	b
75-15-0	Carbon disulfide	20,000	b
75-21-8	Ethylene oxide [Oxirane]	10,000	a, b
75-44-5	Phosgene [Carbonic dichloride]	500	a, b
75-55-8	Propyleneimine [Aziridine, 2-methyl-]	10,000	b
75-56-9	Propylene oxide [Oxirane, methyl-]	10,000	b
75-74-1	Tetramethyllead [Plumbane, tetramethyl-]	10,000	b
75-77-4	Trimethylchlorosilane [Silane, chlorotrimethyl-]	10,000	b
75-78-5	Dimethyldichlorosilane [Silane, dichlorodimethyl-]	5,000	b
75-79-6	Methyltrichlorosilane [Silane, trichloromethyl-]	5,000	b
78-82-0	Isobutyronitrile [Propanenitrile, 2-methyl-]	20,000	b
79-21-0	Peracetic acid [Ethaneperoxoic acid]	10,000	b
79-22-1	Methyl chloroformate [Carbonochloridic acid, methylester]	5,000	b
91-08-7	Toluene 2,6-diisocyanate [Benzene, 1,3-diisocyanato-2-methyl-][1]	10,000	a
106-89-8	Epichlorohydrin [Oxirane, (chloromethyl)-]	20,000	b
107-02-8	Acrolein [2-Propenal]	5,000	b
107-11-9	Allylamine [2-Propen-1-amine]	10,000	b

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
107-12-0	Propionitrile [Propanenitrile]	10,000	b
107-13-1	Acrylonitrile [2-Propenenitrile]	20,000	b
107-15-3	Ethylenediamine [1,2-Ethanediamine]	20,000	b
107-18-6	Allyl alcohol [2-Propen-1-ol]	15,000	b
107-30-2	Chloromethyl methyl ether [Methane, chloromethoxy-]	5,000	b
108-05-4	Vinyl acetate monomer [Acetic acid ethenyl ester]	15,000	b
108-23-6	Isopropyl chloroformate [Carbonochloridic acid, 1-methylethyl ester]	15,000	b
108-91-8	Cyclohexylamine [Cyclohexanamine]	15,000	b
109-61-5	Propyl chloroformate [Carbonochloridic acid, propylester]	15,000	b
110-00-9	Furan	5,000	b
110-89-4	Piperidine	15,000	b
123-73-9	Crotonaldehyde, (E)- [2-Butenal, (E)-]	20,000	b
126-98-7	Methacrylonitrile [2-Propenenitrile, 2-methyl-]	10,000	b
151-56-4	Ethyleneimine [Aziridine]	10,000	b
302-01-2	Hydrazine	15,000	b
353-42-4	Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro[oxybis[methane]]-, T-4-	15,000	b
506-77-4	Cyanogen chloride	10,000	c
509-14-8	Tetranitromethane [Methane, tetranitro-]	10,000	b

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
542-88-1	Chloromethyl ether [Methane, oxybis[chloro-]	1,000	b
556-64-9	Methyl thiocyanate [Thiocyanic acid, methyl ester]	20,000	b
584-84-9	Toluene 2,4-diisocyanate [Benzene, 2,4-diisocyanato-1-methyl-][1]	10,000	a
594-42-3	Perchloromethylmercaptan [Methanesulfenyl chloride, trichloro-]	10,000	b
624-83-9	Methyl isocyanate [Methane, isocyanato-]	10,000	a, b
814-68-6	Acrylyl chloride [2-Propenoyl chloride]	5,000	b
4170-30-3	Crotonaldehyde [2-Butenal]	20,000	b
7446-09-5	Sulfur dioxide (anhydrous)	5,000	a, b
7446-11-9	Sulfur trioxide	10,000	a, b
7550-45-0	Titanium tetrachloride [Titanium chloride (TiCl4) (T-4)-]	2,500	b
7637-07-2	Boron trifluoride [Borane, trifluoro-]	5,000	b
7647-01-0	Hydrochloric acid (conc 37% or greater)	15,000	d
7647-01-0	Hydrogen chloride (anhydrous) [Hydrochloric acid]	5,000	a
7664-39-3	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]	1,000	a, b
7664-41-7	Ammonia (anhydrous)	10,000	a, b
7664-41-7	Ammonia (conc 20% or greater)	20,000	a, b
7697-37-2	Nitric acid (conc 80% or greater)	15,000	b
7719-12-2	Phosphorus trichloride [Phosphorous trichloride]	15,000	b
7726-95-6	Bromine	10,000	a, b

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
7782-41-4	Fluorine	1,000	b
7782-50-5	Chlorine	2,500	a, b
7783-06-4	Hydrogen sulfide	10,000	a, b
7783-07-5	Hydrogen selenide	500	b
7783-60-0	Sulfur tetrafluoride [Sulfur fluoride (SF4), (T-4)-]	2,500	b
7784-34-1	Arsenous trichloride	15,000	b
7784-42-1	Arsine	1,000	b
7803-51-2	Phosphine	5,000	b
8014-95-7	Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide][1]	10,000	e
10025-87-3	Phosphorus oxychloride [Phosphoryl chloride]	5,000	b
10049-04-4	Chlorine dioxide [Chlorine oxide (ClO_2)]	1,000	c
10102-43-9	Nitric oxide [Nitrogen oxide (NO)]	10,000	b
10294-34-5	Boron trichloride [Borane, trichloro-]	5,000	b
13463-39-3	Nickel carbonyl	1,000	b
13463-40-6	Iron, pentacarbonyl- [Iron carbonyl ($Fe(CO)_5$), (TB-5-11)-]	2,500	b
19287-45-7	Diborane	2,500	b
26471-62-5	Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-1][1]	10,000	a

[1]The mixture exemption in § 68.115(b)(1) does not apply to the substance.

Note: Basis for Listing:

a Mandated for listing by Congress.

b On EHS list, vapor pressure 10 mmHg or greater.

c Toxic gas.

d Toxicity of hydrogen chloride, potential to release hydrogen chloride, and history of accidents.

e Toxicity of sulfur trioxide and sulfuric acid, potential to release sulfur trioxide, and history of accidents.

Table 3 to § 68.130—List of Regulated Flammable Substances[1] and Threshold Quantities for Accidental Release Prevention

[Alphabetical Order—63 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Acetaldehyde	75-07-0	10,000	g
Acetylene [Ethyne]	74-86-2	10,000	f
Bromotrifluorethylene [Ethene, bromotrifluoro-]	598-73-2	10,000	f
1,3-Butadiene	106-99-0	10,000	f
Butane	106-97-8	10,000	f
1-Butene	106-98-9	10,000	f
2-Butene	107-01-7	10,000	f
Butene	25167-67-3	10,000	f
2-Butene-cis	590-18-1	10,000	f
2-Butene-trans [2-Butene, (E)]	624-64-6	10,000	f
Carbon oxysulfide [Carbon oxide sulfide (COS)]	463-58-1	10,000	f
Chlorine monoxide [Chlorine oxide]	7791-21-1	10,000	f
2-Chloropropylene [1-Propene, 2-chloro-]	557-98-2	10,000	g
1-Chloropropylene [1-Propene, 1-chloro-]	590-21-6	10,000	g
Cyanogen [Ethanedinitrile]	460-19-5	10,000	f
Cyclopropane	75-19-4	10,000	f

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Dichlorosilane [Silane, dichloro-]	4109-96-0	10,000	f
Difluoroethane [Ethane, 1,1-difluoro-]	75-37-6	10,000	f
Dimethylamine [Methanamine, N-methyl-]	124-40-3	10,000	f
2,2-Dimethylpropane [Propane, 2,2-dimethyl-]	463-82-1	10,000	f
Ethane	74-84-0	10,000	f
Ethyl acetylene [1-Butyne]	107-00-6	10,000	f
Ethylamine [Ethanamine]	75-04-7	10,000	f
Ethyl chloride [Ethane, chloro-]	75-00-3	10,000	f
Ethylene [Ethene]	74-85-1	10,000	f
Ethyl ether [Ethane, 1,1′-oxybis-]	60-29-7	10,000	g
Ethyl mercaptan [Ethanethiol]	75-08-1	10,000	g
Ethyl nitrite [Nitrous acid, ethyl ester]	109-95-5	10,000	f
Hydrogen	1333-74-0	10,000	f
Isobutane [Propane, 2-methyl]	75-28-5	10,000	f
Isopentane [Butane, 2-methyl-]	78-78-4	10,000	g
Isoprene [1,3-Butadinene, 2-methyl-]	78-79-5	10,000	g
Isopropylamine [2-Propanamine]	75-31-0	10,000	g
Isopropyl chloride [Propane, 2-chloro-]	75-29-6	10,000	g
Methane	74-82-8	10,000	f
Methylamine [Methanamine]	74-89-5	10,000	f

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
3-Methyl-1-butene	563-45-1	10,000	f
2-Methyl-1-butene	563-46-2	10,000	g
Methyl ether [Methane, oxybis-]	115-10-6	10,000	f
Methyl formate [Formic acid, methyl ester]	107-31-3	10,000	g
2-Methylpropene [1-Propene, 2-methyl-]	115-11-7	10,000	f
1,3-Pentadinene	504-60-9	10,000	f
Pentane	109-66-0	10,000	g
1-Pentene	109-67-1	10,000	g
2-Pentene, (E)-	646-04-8	10,000	g
2-Pentene, (Z)-	627-20-3	10,000	g
Propadiene [1,2-Propadiene]	463-49-0	10,000	f
Propane	74-98-6	10,000	f
Propylene [1-Propene]	115-07-1	10,000	f
Propyne [1-Propyne]	74-99-7	10,000	f
Silane	7803-62-5	10,000	f
Tetrafluoroethylene [Ethene, tetrafluoro-]	116-14-3	10,000	f
Tetramethylsilane [Silane, tetramethyl-]	75-76-3	10,000	g
Trichlorosilane [Silane, trichloro-]	10025-78-2	10,000	g
Trifluorochloroethylene [Ethene, chlorotrifluoro-]	79-38-9	10,000	f
Trimethylamine [Methanamine, N,N-dimethyl-]	75-50-3	10,000	f

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Vinyl acetylene [1-Buten-3-yne]	689-97-4	10,000	f
Vinyl chloride [Ethene, chloro-]	75-01-4	10,000	a, f
Vinyl ethyl ether [Ethene, ethoxy-]	109-92-2	10,000	g
Vinyl fluoride [Ethene, fluoro-]	75-02-5	10,000	f
Vinylidene chloride [Ethene, 1,1-dichloro-]	75-35-4	10,000	g
Vinylidene fluoride [Ethene, 1,1-difluoro-]	75-38-7	10,000	f
Vinyl methyl ether [Ethene, methoxy-]	107-25-5	10,000	f

[1]A flammable substance when used as a fuel or held for sale as a fuel at a retail facility is excluded from all provisions of this part (see § 68.126).

Note: Basis for Listing:

[a]Mandated for listing by Congress.

[f]Flammable gas.

[g]Volatile flammable liquid.

Table 4 to § 68.130—List of Regulated Flammable Substances[1] and Threshold Quantities for Accidental Release Prevention

[CAS Number Order—63 Substances]

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
60-29-7	Ethyl ether [Ethane, 1,1′-oxybis-]	10,000	g
74-82-8	Methane	10,000	f
74-84-0	Ethane	10,000	f
74-85-1	Ethylene [Ethene]	10,000	f
74-86-2	Acetylene [Ethyne]	10,000	f
74-89-5	Methylamine [Methanamine]	10,000	f

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
74-98-6	Propane	10,000	f
74-99-7	Propyne [1-Propyne]	10,000	f
75-00-3	Ethyl chloride [Ethane, chloro-]	10,000	f
75-01-4	Vinyl chloride [Ethene, chloro-]	10,000	a, f
75-02-5	Vinyl fluoride [Ethene, fluoro-]	10,000	f
75-04-7	Ethylamine [Ethanamine]	10,000	f
75-07-0	Acetaldehyde	10,000	g
75-08-1	Ethyl mercaptan [Ethanethiol]	10,000	g
75-19-4	Cyclopropane	10,000	f
75-28-5	Isobutane [Propane, 2-methyl]	10,000	f
75-29-6	Isopropyl chloride [Propane, 2-chloro-]	10,000	g
75-31-0	Isopropylamine [2-Propanamine]	10,000	g
75-35-4	Vinylidene chloride [Ethene, 1,1-dichloro-]	10,000	g
75-37-6	Difluoroethane [Ethane, 1,1-difluoro-]	10,000	f
75-38-7	Vinylidene fluoride [Ethene, 1,1-difluoro-]	10,000	f
75-50-3	Trimethylamine [Methanamine, N, N-dimethyl-]	10,000	f
75-76-3	Tetramethylsilane [Silane, tetramethyl-]	10,000	g
78-78-4	Isopentane [Butane, 2-methyl-]	10,000	g
78-79-5	Isoprene [1,3,-Butadiene, 2-methyl-]	10,000	g

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
79-38-9	Trifluorochloroethylene [Ethene, chlorotrifluoro-]	10,000	f
106-97-8	Butane	10,000	f
106-98-9	1-Butene	10,000	f
106-99-0	1,3-Butadiene	10,000	f
107-00-6	Ethyl acetylene [1-Butyne]	10,000	f
107-01-7	2-Butene	10,000	f
107-25-5	Vinyl methyl ether [Ethene, methoxy-]	10,000	f
107-31-3	Methyl formate [Formic acid, methyl ester]	10,000	g
109-66-0	Pentane	10,000	g
109-67-1	1-Pentene	10,000	g
109-92-2	Vinyl ethyl ether [Ethene, ethoxy-]	10,000	g
109-95-5	Ethyl nitrite [Nitrous acid, ethyl ester]	10,000	f
115-07-1	Propylene [1-Propene]	10,000	f
115-10-6	Methyl ether [Methane, oxybis-]	10,000	f
115-11-7	2-Methylpropene [1-Propene, 2-methyl-]	10,000	f
116-14-3	Tetrafluoroethylene [Ethene, tetrafluoro-]	10,000	f
124-40-3	Dimethylamine [Methanamine, N-methyl-]	10,000	f
460-19-5	Cyanogen [Ethanedinitrile]	10,000	f
463-49-0	Propadiene [1,2-Propadiene]	10,000	f

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
463-58-1	Carbon oxysulfide [Carbon oxide sulfide (COS)]	10,000	f
463-82-1	2,2-Dimethylpropane [Propane, 2,2-dimethyl-]	10,000	f
504-60-9	1,3-Pentadiene	10,000	f
557-98-2	2-Chloropropylene [1-Propene, 2-chloro-]	10,000	g
563-45-1	3-Methyl-1-butene	10,000	f
563-46-2	2-Methyl-1-butene	10,000	g
590-18-1	2-Butene-cis	10,000	f
590-21-6	1-Chloropropylene [1-Propene, 1-chloro-]	10,000	g
598-73-2	Bromotrifluorethylene [Ethene, bromotrifluoro-]	10,000	f
624-64-6	2-Butene-trans [2-Butene, (E)]	10,000	f
627-20-3	2-Pentene, (Z)-	10,000	g
646-04-8	2-Pentene, (E)-	10,000	g
689-97-4	Vinyl acetylene [1-Buten-3-yne]	10,000	f
1333-74-0	Hydrogen	10,000	f
4109-96-0	Dichlorosilane [Silane, dichloro-]	10,000	f
7791-21-1	Chlorine monoxide [Chlorine oxide]	10,000	f
7803-62-5	Silane	10,000	f
10025-78-2	Trichlorosilane [Silane, trichloro-]	10,000	g
25167-67-3	Butene	10,000	f

[1]A flammable substance when used as a fuel or held for sale as a fuel at a retail facility is excluded from all provisions of this part (see § 68.126).

Note: Basis for Listing:

[a]Mandated for listing by Congress.

[f]Flammable gas.

[g]Volatile flammable liquid.

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