

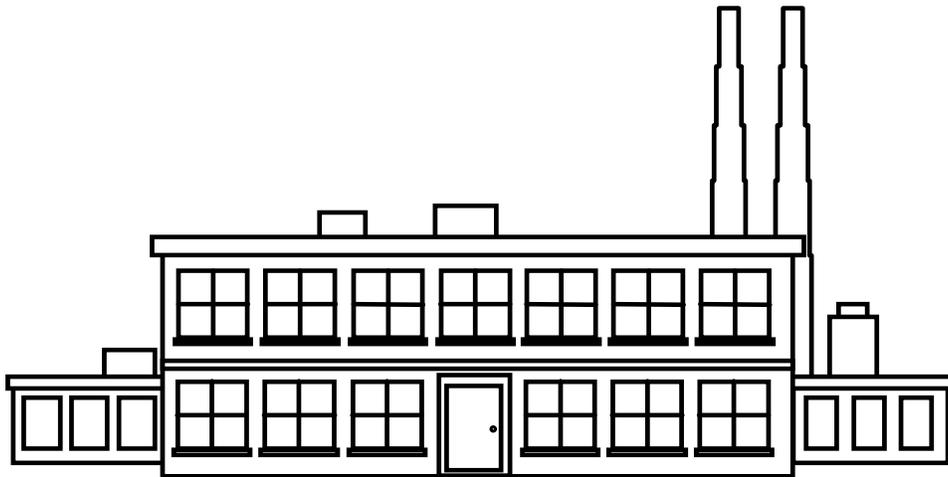


Illinois  
Environmental  
Protection Agency

Bureau of Air  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

January 2008

# 2007



# Annual Emission Report Instructions

**WHEN COMPLETED, MAIL THE ANNUAL EMISSION REPORT  
TO:**

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
DIVISION OF AIR POLLUTION CONTROL  
AIR QUALITY PLANNING SECTION (#39)  
1021 NORTH GRAND AVENUE EAST  
P.O. BOX 19276  
SPRINGFIELD, IL 62794-9276**

**ATTN: ANNUAL EMISSION REPORT**

**[www.epa.state.il.us/air/aer](http://www.epa.state.il.us/air/aer)**

**217-524-4343**

**Due Date  
May 1, 2008**

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## Section 1. General Instructions and Questions

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### INTRODUCTION

The Clean Air Act as amended in 1990 (CAA) requires increased reporting and tracking of emissions by both industry and the state. Under one of the provisions of these amendments, Section 182(a)(3)(B), emission sources in ozone nonattainment areas are required to submit annual stationary source emission reports (Emission Statements) to the state in which they operate. The State of Illinois has had an annual emission reporting requirement for a number of years that applies to all sources required to have an operating permit in accordance with 35 Ill. Adm. Code Sections 201.302(a) and 201.302(b). The Illinois Environmental Protection Agency (IEPA) has integrated the reporting requirement of Section 182(a)(3)(B) into its existing annual emission reporting requirement and codified this requirement in 35 Ill. Adm. Code Part 254.

### Types of reports

“Long”- Report plant-wide emissions plus emissions for each individual emission point plus control device and stack information. This type of report applies to:

- Sources permitted to emit 25 tons per year or more of any combination of regulated air pollutant.
- Sources required to have a CAAPP permit
- Sources in ozone nonattainment areas that have a potential to emit 25 tons per year or more of either VOM or NOx. These sources used to report under a “medium” report.

“Short”- plant-wide emissions. These are sources that do not fall into the “long” category.

### DO I HAVE TO FILE?

If you have, or are required to have, an air pollution operating permit you are required to file an Annual Emission Report. This requirement has been in effect since April 15, 1971 but has been modified to incorporate some of the provisions contained in Section 182(a)(3)(B) of the 1990 Clean Air Act as amended in 1990 (CAA). The original provisions requiring the filing of Annual Emission Reports as well as those required by the Clean Air Act as amended in 1990 are contained in 35 Ill. Adm. Code Part

254. A copy of this rule may be obtained from the IEPA, Division of Air Pollution Control (DAPC).

### WHY ARE CO<sub>2</sub>, METHANE AND N<sub>2</sub>O NOW SHOWING UP ON THE REPORT?

With issues of global warming becoming more and more prevalent, the Illinois EPA is undertaking the compilation of a greenhouse gas emission inventory for carbon dioxide (CO<sub>2</sub>), methane and nitrous oxide (N<sub>2</sub>O).

Emissions for these pollutants have been precalculated for you based on other information you have previously submitted. Emission factors for these pollutants for common equipment can be found in Appendix E. **Reporting these emissions (other than those sources already required to report methane emissions) is completely optional.** Your help in compiling an accurate greenhouse gas inventory is appreciated.

### WHAT IF I FAIL TO FILE OR I FILE LATE?

Failure to file a complete Annual Emission Report by the required deadline is a violation of 35 Ill. Adm. Code 201.302(a) and is subject to the penalties prescribed in Section 42 of the Illinois Environmental Protection Act. The IEPA intends to ensure compliance with this reporting requirement through careful review of noncomplying sources. Furthermore, the United States Environmental Protection Agency is requiring the IEPA to provide quarterly reports of all noncomplying sources in ozone nonattainment areas, continuing each quarter until there is full compliance.

### WHAT IF I DO NOT RECEIVE MY FORMS BY FEBRUARY 1?

Failure to receive the Source Inventory Report forms from the IEPA does not relieve you of the obligation to file a timely report. Contact the IEPA to request the forms.

### HOW DO I CONTACT THE IEPA?

## Section 1. General Instructions and Questions

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Questions regarding the Annual Emission Report should be directed to Marie Mealman at 217-524-4343. Please have your Id Number (see Section 3) before you call.

Questions about permits and allowable emissions should be directed to the Permit Section or the permit analyst listed on your permit at 217-782-2113.

Appendix D also contains other useful telephone numbers and addresses.

### WHAT IF I DO NOT RECEIVE THE CORRECT FORMS?

Immediately contact the IEPA at the location shown at the end of this section or in Appendix D. If you received the Detailed Annual Emission Report and you need only file the Summary Annual Emission Report, you do NOT need to contact us. Simply fill out the Emissions Summary part of the Annual Emission Report and return it with a statement that your source does not meet the requirements for the more detailed emission reporting.

### CAN I RECEIVE THE SOURCE INVENTORY REPORT FOR ALL MY EMISSION UNITS?

Yes. Even if a source is not required to file the Detailed Annual Emission Report, the complete report can be provided upon request. Contact IEPA Air Quality Planning section at the address shown near the end of this section and in Appendix D. A request for the Detailed Annual Emission Report does not oblige a source to provide additional detailed information if not required by the provisions of the rule.

### HOW DO I REQUEST CONFIDENTIALITY?

Items such as source address, locational parameters and annual source emissions may not be claimed as confidential. Items such as annual raw material throughput can be claimed as confidential. Since the report (Emission Summary Report) described in this booklet does not include throughput information, nothing on

this report can be claimed as confidential. Reference 35 Ill. Adm. Code 130.

### WHAT POLLUTANTS MUST BE REPORTED?

All sources must report annual emissions for regulated pollutants. This includes criteria pollutants and HAPs. For sources that emit HAPs, a HAP is to be reported only if there is a specific regulation (NESHAP or MACT) that applies to the source. For example, if your source is subject to the MACT for halogenated solvent cleaning. Emissions of the HAPs used in that solvent cleaning must be reported. Please note: Your permit may require you to report emissions of HAPs.

#### Criteria Pollutants

- CO - CARBON MONOXIDE
- LEAD – Lead
- NH3-Ammonia
- NOX - Nitrogen Oxides
- PART - Particulate Matter
- PM10 - Particulate Matter < 10 microns
- PM2.5 - Particulate Matter < 2.5 microns
- SO2 - Sulfur Dioxide
- VOM - Volatile Organic Material

#### Hazardous Air Pollutants (HAPs)

- Individual HAPs regulated at your source by NESHAP, MACT or other regulations

### MUST I REPORT FUGITIVE EMISSIONS?

Yes. Fugitive emissions of VOM from permitted sources must be reported. Fugitive VOM emission sources include (but are not limited to) valves, pumps, flanges, leaks, and solvent clean-up operations.

Annual source totals of fugitive PART and PM10 emissions **MUST** also be reported by facilities involved in mining operations (SIC groups 10 - 14), manufacturing operations (SIC groups 20 - 39), and electrical generating operations (SIC Group 491),

**AND** which are located in the following counties and townships:

- Cook - All
- Lake - Shields, Waukegan, Warren

## Section 1. General Instructions and Questions

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- DuPage - Addison, Winfield, York
- Will - Dupage, Plainfield, Lockport, Channahon, Peotone, Florence, Joliet
- Peoria - Richwoods, Limestone, Hollis, Peoria
- Tazewell - Fondulac, Pekin, Cincinnati, Groveland, Washington
- Macon - Decatur, Hickory Point
- Rock Island - Blackhawk, Coal Valley, Hampton, Moline, South Moline, Rock Island, South Rock Island
- LaSalle - LaSalle, Utica
- Madison - Alton, Chouteau, Collinsville, Edwardsville, Fort Russell, Godfrey, Granite City, Nameoki, Venice, Wood River
- St. Clair - Canteen, Caseyville, Centerville, St. Clair, Stites, Stookey, Sugar Loaf, Millstadt

The types of PART and PM10 fugitive emissions that must be reported include (but are not limited to) emissions from storage piles, loading and unloading operations, and traffic areas.

The source-wide totals of fugitive VOM, PART, and PM10 emissions must be separately identified and reported on the EMISSION SUMMARY page. The total VOM, PART and PM10 emission values are to include both the fugitive and nonfugitive values. For example, if a source had 95 tons per year of nonfugitive PART emissions and 20 tons per year of fugitive PART emissions, then 115 tons per year of PART emissions would be reported on the EMISSION SUMMARY page along with 20 tons per year identified as fugitive particulate emissions.

### WHAT OTHER INFORMATION MUST BE REPORTED?

Title V (CAAAP) permits, Federally Enforceable State Operating Permits (FESOP's) and Operating permits commonly contain conditions specifying data or certification requirements that must be provided with the annual emission report. For example, issued Title V permits require annual compliance certifications to be completed and filed with the annual emission report.

You should review your permit before completing the report to ensure you are providing all the necessary information.

### I NEED ADDITIONAL HELP. WHAT SHOULD I DO?

Persons knowledgeable of the Annual Emission Report can be reached at 217-524-4343. It would be helpful if you have your facility identification number available. During busy periods, you may not be able to receive help immediately. In this event, please leave your name, telephone number, and Id Number. A staff member will call you as soon as possible. **This may be several days during peak periods. Please be patient!**

### WHERE DO I SEND THE ANNUAL EMISSION REPORT?

Mail the completed and signed report to the address below:

Illinois EPA  
Division of Air Pollution Control  
Air Quality Planning Section (#39)  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

Attn: Annual Emission Report

### WHEN SHOULD I CONTACT THE PERMIT SECTION?

You should contact the Permit Section for any of the following reasons:

- You have a question about your allowable or estimated emissions.
- You wish to add an emission unit.
- You wish to delete an emission unit that has been permanently shut down or dismantled.
- The facility has closed or ownership has changed.
- If you feel a permit is no longer needed or your equipment is exempt from permit requirements.

### HOW CAN I CONTACT THE PERMIT SECTION?

## Section 1. General Instructions and Questions

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The Permit Section mailing address and telephone number is listed below:

Illinois EPA  
Division of Air Pollution Control  
Permit Section Mail Code (#11)  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276

Telephone: 217-782-2113

## Section 2. IEPA Supplied Report Forms

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This section provides a general description of the forms associated with the "short" Annual Emission Report. Detailed instructions for the use of the forms are provided in following sections.

### SOURCE INVENTORY REPORT

The IEPA provides each source with a Source Inventory Report. The report forms contain data fields the source is required to verify or complete to fulfill its annual emission reporting requirements. The instructions provided in this booklet are directed toward those sources completing the shorter, "Emission Summary" report.

### EMISSION SUMMARY

Each and every Annual Emission Report has a common element called the Emission Summary. All sources are required to complete this part of the Annual Emission Report as described in more detail in Section 3. Within the Emission Summary portion of the report are the Source Data form, the Annual Source Emissions form and the Permit Listing form.

### SOURCE DATA FORM

The Source Data form provides data fields for the verification and correction of information such as addresses, contact names, geographical location data, and provides space for the certification of the report.

### ANNUAL SOURCE EMISSIONS FORM

This portion of the Emission Summary deals with the verification and/or correction of regulated pollutant emissions. Annual source totals of all regulated pollutants emitted by your source (in tons per year) must be provided or verified on this report. Fugitive VOM, PART, and PM10 emissions must also be reported on this form.

### PERMIT LISTING FORM

A report listing permit information for the source is included as part of the Emission Summary. You should check the permit(s) listed on this report to see if they are up to date and accurate. In addition, permits will often require you to provide supplemental data with the annual emission report.

If there are any errors present in the permit listing, such as incorrect permit status or expiration date, contact the Division of Air Pollution Control, Permit Section, in writing, to have the discrepancies corrected. The Permit Section's address may be found in Section 1 or Appendix D.

### EQUIPMENT LISTING

This portion of the Annual Emission Report lists the equipment that is permitted at your site along with their associated control devices and exhaust points. If this list is incorrect, you should contact the Permit Section to find out what steps are necessary to correct the problem. It is not required to return the equipment listing with your submittal.

## Section 3. Emission Summary Report

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This section provides a description of the Emission Summary Report forms that all sources are required to submit. The Emission Summary Report includes the Source Data form, Annual Source Emissions form, and Permit Listing Report form.

### GENERAL INSTRUCTIONS

Each person reporting should carefully follow these instructions and complete the appropriate sections of the Annual Emission Report as required. Every effort should be made to accurately determine the required data. Make sure your report is signed and dated by the proper authority before submitting it to the IEPA. Unsigned reports will be considered incomplete and will not be accepted by the IEPA. Unsigned reports also may be subject to other penalties.

In completing the Annual Emission Report forms, you will find that space has been provided for you to add, change, correct or update information in some but not all data fields. **NOTE:** If a data field (such as the Permit Number) does not have space provided to add or correct information, it is provided for your reference only and cannot be changed.

When making entries, please **distinguish** between data values that are "zero" and those that are unknown or blank. If an item has a zero value, be certain to write "0" in the appropriate space. If a data field does not apply to your situation, indicate this by entering "N/A" for not applicable.

### EMISSION SUMMARY REPORT

This report contains information and data fields related to source location and description, total annual source-wide emissions for all regulated pollutants emitted by the source, permit information, and the certification block, which provides space for the signature of the certifying individual. These data fields are located on the SOURCE DATA, ANNUAL SOURCE EMISSIONS, and PERMIT LISTING forms and are described in the following paragraphs.

### SOURCE DATA FORM

The Source Data form contains data fields for source identification, source location, and Annual Emission Report certification. In completing this form, the following information **MUST** be provided (or verified):

- Source address
- Source contact information
- Mailing address
- Mailing address contact person information (e-mail address optional)
- SIC code or NAICS (including additional codes, if necessary)
- Completion of the Certification Block to include the signature, date, title, and telephone number of the certifying individual.

**Optional** information on this form includes:

- FEIN number
- Dun & Bradstreet Number
- Latitude
- Longitude

**ID NUMBER** - Your source identification number is the 9-digit code that immediately precedes your facility name on the SOURCE DATA form. This number has been assigned by the IEPA and is based upon the Federal Information Processing Standards (FIPS) code. The ID Number must **not** be changed on the SOURCE DATA form. If you feel your ID Number is incorrect for any reason, contact the DAPC.

## Section 3. Emission Summary Report

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### **SOURCE IDENTIFICATION AND LOCATION**

- Several data fields are used to identify and locate your source. The **AIRS** (Aerometric Information Retrieval System) and **FINDS** (Facilities Index System) are the USEPA standard identification codes for your source. These codes are for IEPA use only and are **not** to be changed.

**FEIN** - The **FEIN** number (Federal Employers Identification Number) is a nine-digit number that is required for business transactions. This number may be obtained from or verified with your firm's business or accounting department.

**D & B** - The Dun and Bradstreet number is a 9 digit number that is often referred to as the **DUNS** number (**Data Universal Numbering System**). You may find your DUNS number by calling Dun and Bradstreet in Bethlehem, PA at (610) 882-7000.

**LATITUDE and LONGITUDE** - The latitude and longitude parameters are the locational coordinates of your source.

**NAICS CODES** - North American Industry System (NAICS) codes are the replacement to the old SIC codes. Like SIC, these codes represent the economic activity at a source, but are six digits long. A source may have up to six separate NAICS codes. The Bureau of Air has prepopulated the NAICS code based upon your SIC. If corrections or additions are necessary, please do so in the spaces provided on the annual emission report forms.

The Bureau of Air is currently undertaking a task to determine coordinates based upon aerial photography. Update this value only if you know the coordinates are wrong.

**SIC CODES** - Standard Industrial Classification (SIC) codes are four-digit numbers that classify sources according to their economic activity. SIC codes are listed in the *Industrial Classification Manual* published by the Office of Management and Budget. A source may have up to six separate SIC codes. If corrections or additions are necessary, please do so in the spaces provided on the form.

**SOURCE ADDRESS** - This is the address of the physical location of your source according to DAPC records. **Post office box numbers must not be used.** The contact information is for the source environmental contact person who could answer technical questions regarding the contents of the Annual Emission Report. If corrections are necessary in the Source Address, please do so in the space provided on the form.

### **ANNUAL EMISSION REPORT**

**MAILING ADDRESS** - This is the address of the location to which the Annual Emission Report should be sent. This address may or may not be different from the Source Address. Post Office box numbers may be used. The contact person should be the person to whom correspondence should be directed. If corrections are necessary in the Annual Emission Report Mailing Address, please do so in the space provided on the form.

**CERTIFICATION BLOCK** - The Certification Block provides space for the signature of the certifying individual. All submittals must be signed and dated. This certification applies to all information submitted or verified in an Annual Emission Report. Annual Emission Reports without an authorized signature will be considered incomplete and will not be accepted by the IEPA. The person signing the Annual Emission Report must certify that the information reported is complete, true, and accurate to the best knowledge of the certifying individual. This person will take legal responsibility for the Annual Emission Report's accuracy. The certifying individual must be the owner and operator of the emission source or their authorized agent with evidence of authority to sign the report, as specified in 35 Ill. Adm. Code 201.154 or 201.159.

### **ANNUAL SOURCE EMISSIONS FORM**

Total emissions of all regulated pollutants from your source during the reporting year must be listed on this form. Some of the pollutants may already be preprinted on the form, along with their associated allowable and estimated values

## Section 3. Emission Summary Report

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(in tons per year). Space has been provided for adding any pollutants your source emitted that are not preprinted on the form. Any preprinted, IEPA estimated values must be verified before submittal to the IEPA.

Regulated pollutants are defined and listed in these instructions. Appendix G also provides a list of hazardous air pollutants. If your source emits any of these pollutants **and** the pollutant is regulated for your type of source (a specific regulation exists for your type of source), you are required to provide **annual source totals** of the pollutants.

If you are unsure whether your source is required to report hazardous air pollutants, contact the Technical Support Unit of the IEPA Permit section at telephone number 217-782-2113. Refer to your Material Safety Data Sheets (MSDS) to determine what hazardous air pollutants your source emits.

**ALLOWABLE EMISSIONS** - The allowable emissions of the pollutant, in tons per year for the entire source, are shown for your reference. Your certification of the accuracy of the data in the Annual Emission Report **does not** include this item. Allowable emissions are calculated by taking the sum of all the allowable emission rates times the maximum hours of operation for each applicable emission unit within the source. Allowable emissions are determined by 35 Ill. Adm. Code Subchapter B, or special conditions on operating permits that limit emissions to totals other than that allowed by the regulations. For emission units that do not have a rule limiting emissions, e.g., NO<sub>x</sub> from small gas boilers, the allowable emission rate is assumed to be the maximum emission rate.

**EMISSIONS REPORTED FOR 2006** - The emissions (in tons per year) reported (or verified) by your facility for calendar year 2006.

**IEPA ESTIMATED EMISSIONS** - The emissions of the pollutant, in tons per year, for the entire source, as estimated by the IEPA. This value is calculated by taking the sum of all the average emission rates times the average

hours of operation for all emission units within the source.

**SOURCE REPORTED EMISSIONS FOR 2007** - Space has been provided for you to report emissions for each pollutant, in tons per year. Enter a figure for each pollutant, even if the figure is the same as the IEPA estimated emissions. If there were zero emissions of a pollutant, enter a zero in the space. **DO NOT** leave any spaces blank.

You may report pollutants that are not listed on the form by simply writing the pollutant name and source-reported emissions on the blank, unused portion of the form. Fugitive VOM, PART, and PM<sub>10</sub>) emissions, as well as hazardous air pollutants may be listed in a similar manner. Appendix F contains emission factors and equations that may be helpful in estimating your source reported emissions.

### PERMIT LISTING FORM

This report provides a list of all the permits issued from the IEPA to your source. If additions, corrections, or deletions to the permit list are necessary, please contact the Permit Section of the DAPC **in writing** to have the error corrected. The Permit Section's address may be found in Appendix E. Please do **not** make additions or deletions on the Permit Listing Report - they will be ignored.

**PERMIT NUMBER** - The permit number (for both the operating and construction permit) is an eight-digit number that identifies a group of related emission units and control devices at your source. The first two digits of the number represent the year in which the permit application was originally received by the DAPC. The second two digits represent the month in which the application was received, and the last four digits represent the order in which the application was received that month.

**TYPE OF PERMIT** - Types of permits will be "Operating," "Construction," "FESOP" (Federally Enforceable State Operating Permit), "Simple", "Title V", or "Lifetime." Permit applications submitted as "Joint" will be denoted as "Operating."

## Section 3. Emission Summary Report

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**OPERATION NAME** - The Operation Name is a description of the equipment or process covered by the permit.

**PERMIT STATUS** - The current permit status is indicated by one of the following:

- Granted - The permit application has been granted.
- Denied - The permit application has been denied.
- Rejected - The permit application has been rejected.
- Blank - No status assigned, permit application under review.

**STATUS DATE** - The effective date the permit status was assigned.

**EXPIRATION DATE** - The expiration date of the operating permit. Construction permits and Lifetime permits do not have expiration dates.

## Appendix A. Abbreviations

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Abbreviations and acronyms used in the Annual Emission Report instructions are alphabetically listed below, with accompanying definitions.

Agency or IEPA	Illinois Environmental Protection Agency
CAA	1990 Clean Air Act as amended in 1990
CAAPP	Clean Air Act Permit Program
DAPC	Division of Air Pollution Control, Illinois Environmental Protection Agency
FEIN	Federal Employers Identification Number
HAP	Hazardous Air Pollutant
ID Number	IEPA DAPC Source Identification Number
MACT	Maximum Achievable Control Technology
NAICS	North American Industry Classification System
NESHAP	National Emission Standard for Hazardous Air Pollutants
SIC	Standard Industrial Classification Code
TITLE V	Title V of the Clean Air Act as amended in 1990
tpy or TPY	Tons per year
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

## Appendix B. Definitions

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This section provides an alphabetical listing of terms used in the Annual Emission Report Instructions. Where applicable, the definitions used in the appropriate rules and regulations have been quoted here.

**ACTUAL EMISSIONS:** The rate of emissions of a regulated pollutant from a source or emissions unit for the calendar year, seasonal period, day or other period of time as specified, based on the best information available to the owner or operator of that emission unit. Actual emission rates include startup, shutdown or malfunction emissions. The calculation of actual emissions must follow an "emission determination method." Where, for any reason, a source has measured any of its emissions, the source must report the measured total as its "actual emissions" for those pollutants rather than using an estimation method to derive the total for that period of time during which the measurements were taken.

**AIR CONTAMINANT:** Any solid, liquid or gaseous matter, any odor or any form of energy that is capable of being released into the atmosphere from an emission source.

**ALLOWABLE EMISSIONS:** The emission rate of a source calculated using the maximum rated capacity of the source, subject to enforceable permit conditions or other enforceable limits and any applicable emission standards adopted by 35 Ill. Adm. Code, Subtitle Chapter B, or the USEPA under Section 113 of the Clean Air Act. If a source is not subject to permit conditions or emission standards, the allowable emissions are assumed to be the source's maximum emissions.

**AMBIENT AIR:** The atmosphere external to buildings comprising emission sources.

**AMBIENT AIR QUALITY STANDARDS:** Standards promulgated by the Pollution Control Board pursuant to authority found in 35 Ill. Adm. Code 243 or by the USEPA pursuant to authority found in the Clean Air Act and its amendments.

**CERTIFYING INDIVIDUAL:** The individual responsible for the certification of the accuracy of the Annual Emission Report and who will take legal responsibility for the information verified or reported in the Annual Emission Report.

**CLEAN AIR ACT:** The Clean Air Act of 1970, as amended by the amendments of 1977 and 1990.

**CONFIDENTIAL DATA:** Information submitted under the Environmental Protection Act, which is not a trade secret nor privileged information, and which is accorded confidential treatment for business or privacy purposes. For further definition of confidential data refer to 35 Ill. Adm. Code 130

**CONTROL DEVICE:** Equipment, such as an afterburner, absorber, scrubber, condenser, cyclone or baghouse used to remove or prevent the emission of pollutants from a contaminated air stream. Control devices also may include methods and procedures used to reduce pollutant emissions (such as water sprays used for dust suppression).

**EMISSIONS:** Pollutants discharged into the atmosphere from smokestacks, manufacturing processes, vents, and surface areas of commercial or industrial facilities and other stationary sources.

**EMISSION RATE:** Total quantity of any air contaminant discharge into the atmosphere in a given period.

**EMISSION SUMMARY:** The portion of the Annual Emission Report that contains data fields for source identification, total actual emissions of regulated air pollutants emitted by the source, permit information, and the certification block that includes the signature of the certifying individual.

## Appendix B. Definitions

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**EMISSION UNIT:** Any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant. The term "**POINT**" is used on the Annual Emission Report forms to indicate an emission unit. A unique, four-digit number is assigned to each emission unit or point by the DAPC database.

**NAICS:** North American Industry Classification System. A series of codes to classify establishments according to the type of economic activity in which they are engaged. National Industry Classification System is replacing the U.S Standard Industrial Classification (SIC) system.

**NITROGEN OXIDES (NO<sub>x</sub>):** A product of combustion sources and a major contributor to the formulation of ozone in the troposphere.

**NONATTAINMENT AREA:** A geographic area that does not meet one or more of the National Ambient Air Quality Standards for the criteria pollutants specified in the Clean Air Act.

**NONVOLATILE ORGANIC MATERIAL:** Organic materials or compounds that have been determined to have negligible photochemical reactivity but are still regulated pollutants and must be reported in the Annual Emission Report. Nonvolatile organic materials include the following specific chemicals or groups of chemicals:

- 1-chloro-1-fluoroethane (HCFC-151a)
- 1-chloro-1,1-difluoroethane (HCFC-142b)
- 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane
- 1,1-dichloro-1-fluoroethane (HCFC-141b)
- 1,1-difluoroethane (HFC-152a)
- 1,1,1-trichloroethane (methyl chloroform)
- 1,1,1-trifluoro-2,2-dichloroethane (HCFC-123)
- 1,1,1-trifluoroethane (HFC-143a)
- 1,1,1,2-tetrafluoroethane (HFC-134a)
- 1,1,1,2,3-pentafluoropropane (HFC-245eb)
- 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mee)
- 1,1,1,2,3,3-hexafluoropropane (HFC-236ea)
- 1,1,1,3,3-pentafluoropropane (HFC-245fa)
- 1,1,1,3,3-pentafluorobutane (HFC-365-mfc)
- 1,1,1,3,3,3-hexafluoropropane (HFC-236fa)
- 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113)
- 1,1,2,2-tetrafluoroethane (HFC-134)
- 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane
- 1,1,2,2,3-pentafluoropropane (HFC-245ca)
- 1,1,2,3,3-pentafluoropropane (HFC-245ea)
- 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)
- 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114)
- 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)
- 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane
- 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane
- 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)
- 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)
- acetone (2-propanone)
- chlorodifluoromethane (CFC-22)
- chlorofluoromethane (HCFC-31)
- chloropentafluoroethane (CFC-115)
- dichlorodifluoromethane (CFC-12)
- difluoromethane (HFC-32)
- ethane

## Appendix B. Definitions

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ethylfluoride (HFC-161)

methane

methyl acetate

methylene chloride (dichloromethane)

parachlorobenzotrifluoride (PCBTF)

perchloroethylene (tetrachloroethylene)

pentafluoroethane (HFC-125)

trichlorofluoromethane (CFC-11)

trifluoromethane (HFC-23)

cyclic, branched or linear completely-methylated siloxanes

perfluorocarbon compounds which fall into these classes

- Completely fluorinated cyclic, branched or linear completely fluorinated alkanes
- Completely fluorinated ethers with no unsaturations
- Completely fluorinated tertiary amines with no unsaturations
- Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

**PEAK OZONE SEASON:** "Peak ozone season" means the months of June, July and August.

**POTENTIAL TO EMIT:** The capability of a source to emit a pollutant at maximum design capacity, except as constrained by enforceable permit conditions that include restrictions on the hours of operation and the type or amount of material combusted, stored or processed, or the installation of air pollution control equipment.

**REGULATED POLLUTANT:** Pollutants for which National Ambient Air Quality Standards or specific regulations limiting emissions are established. This is further defined under Section 39 of the Illinois Environmental Protection Act. A current list of regulated air pollutants may be found in Section 1 of this booklet under the heading "WHAT AIR EMISSIONS MUST BE REPORTED?". Hazardous air pollutants now regulated in accordance with Section 112 of the Clean Air Act are listed in Appendix G of this booklet..

**SIC CODE:** Standard Industrial Classification code. A series of codes devised by the Office of Management and Budget (OMB) to classify establishments according to the type of economic activity in which they are engaged.

**SOURCE:** All of the pollutant emitting activities that are located on one or more contiguous or adjacent properties and are under the control of the same person.

**SOURCE INVENTORY REPORT:** The report that the IEPA provides to the source that lists data fields for the information required in the Annual Emission Report and contains the information, if any, that previously has been reported to the IEPA for those data fields.

**STATIONARY SOURCE:** Any building, structure, facility, plant, or installation which emits, or may emit, any air pollutant subject to regulation under the Clean Air Act; an emission source that is not self-propelled.

**VOLATILE ORGANIC MATERIAL (VOM):** Any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) that participates in atmospheric photochemical reactions and is not specifically designated by the USEPA as having negligible photochemical reactivity.

## Appendix C. Conversion Factors

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Typical conversion factors and other frequently used units of measure are listed below to provide assistance in estimating annual source emissions.

### Energy:

- 1 BTU/hour = 0.293 Watts
- 1 Megawatt = 3,413,000 BTU/hour
- 1 boiler horsepower (BHP) = 33520 BTU/hr
- 1 boiler horsepower (BHP) = 9803 Watts
- 1 lb/mmbtu = 1.548 kg/MW-hr
- 1 pound steam/hour (300 psi, saturated) = 1202 BTU/hour
- 1 million ft<sup>3</sup> = 10,000 therms
- 1 therm = 100,000 BTU
- 1 therm = 100 ft<sup>3</sup> natural gas
- 1 ft<sup>3</sup> natural gas  $\approx$  1000 BTU
- 1 Pound of fuel oil  $\approx$  19,000 BTU

### Pressure:

- 1 atmosphere = 14.69 psi
- 1 atmosphere = 760 millimeters of mercury
- 1 psi = 0.068 atmospheres
- 1 millimeter of mercury = 0.00132 atmospheres
- 1 millimeter of mercury = 0.0193 psi

### Volume:

- 1 ft<sup>3</sup> (liquid) = 7.48 gallons
- 1 barrel = 42 gallons

### Weight:

- 1 kilogram = 1000 grams = 2.205 lbs
- 1 pound = 7000 grains
- 1 pound = 0.454 kilograms = 454 grams
- 1 ton = 2000 pounds

### Other:

- Density of water = 8.337 lb/gal

## Appendix D. Addresses and Websites

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Annual Emission Report Mailing Address	Illinois EPA Division of Air Pollution Control Air Quality Planning Section (#39) 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276 Attn: Annual Emission Report  Phone: 217-524-4343
Permit Section Mailing Address	Illinois EPA Division of Air Pollution Control Permit Section (#11) 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276  Phone: 217-782-2113
Air Pollution Control Location Address	Illinois EPA Division of Air Pollution Control 1340 North 9th Street Springfield, IL 62702
USEPA (AP-42)	United States EPA Office of Air Quality Planning and Standards Research Triangle Park, NC 27717
USEPA's Home Page	<a href="http://www.epa.gov">www.epa.gov</a>
USEPA Region V Home Page	<a href="http://www.epa.gov/Region5.html">www.epa.gov/Region5.html</a>
Illinois EPA's Home Page	<a href="http://www.epa.state.il.us">www.epa.state.il.us</a>
Emission Estimation Software	<a href="http://www.epa.gov/ttn/chief/software/index.html">www.epa.gov/ttn/chief/software/index.html</a>
AP-42	<a href="http://www.epa.gov/ttn/chief/ap42/index.html">www.epa.gov/ttn/chief/ap42/index.html</a>
NAICS Codes Listing (and SIC)	<a href="http://www.census.gov/epcd/www/naics.html">www.census.gov/epcd/www/naics.html</a>
Annual Emission Report	<a href="http://www.epa.state.il.us/air/aer">www.epa.state.il.us/air/aer</a>
Are you required to have a permit?	<a href="http://www.epa.state.il.us/small-business/pollution-control-permit/apc-permit.html">www.epa.state.il.us/small-business/pollution-control-permit/apc-permit.html</a>

## Appendix E. Emission Factors and Equations

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The following list of emission factors and equations may be helpful in estimating emissions from emission units such as boilers, incinerators, grain facilities, chrome plating equipment, dry cleaning facilities, sterilizing equipment, and storage tanks. **The factors contained herein are suggested only, and are not meant to supercede any previous factors established by permits or other references.**

### NATURAL GAS FIRED BOILERS:

≥100 million BTU/hr	CO:	84 lb/million cubic feet burned
	CO <sub>2</sub> :	120,000 lb/million cubic feet burned
	METHANE:	2.3 lb/million cubic feet burned
	N <sub>2</sub> O:	2.2 lb/million cubic feet burned
	NH <sub>3</sub> :	3.2 lb/million cubic feet burned
	NO <sub>x</sub> :	280 lb/million cubic feet burned
	PART:	7.6 lb/million cubic feet burned
	PM <sub>10</sub> :	7.6 lb/million cubic feet burned
	SO <sub>2</sub> :	0.6 lb/million cubic feet burned
	VOM:	5.5 lb/million cubic feet burned
<100 million BTU/hr	CO:	84 lb/million cubic feet burned
	CO <sub>2</sub> :	120,000 lb/million cubic feet burned
	METHANE:	2.3 lb/million cubic feet burned
	N <sub>2</sub> O:	2.2 lb/million cubic feet burned
	NH <sub>3</sub> :	3.2 lb/million cubic feet burned
	NO <sub>x</sub> :	100 lb/million cubic feet burned
	PART:	7.6 lb/million cubic feet burned
	PM <sub>10</sub> :	7.6 lb/million cubic feet burned
	SO <sub>2</sub> :	0.6 lb/million cubic feet burned
	VOM:	5.5 lb/million cubic feet burned

### FUEL OIL-FIRED BOILERS

Fuel Oil #1 or #2	CO:	5 lb/1000 gallons burned
	CO <sub>2</sub> :	22,300 lb/1000 gallons burned
	METHANE:	0.052 lb/1000 gallons burned
	N <sub>2</sub> O:	0.11 lb/1000 gallons burned
	NH <sub>3</sub> :	0.8 lb/1000 gallons burned
	NO <sub>x</sub> :	20 lb/1000 gallons burned
	PART:	2 lb/1000 gallons burned
	PM <sub>10</sub> :	1 lb/1000 gallons burned
	PM <sub>2.5</sub> :	0.25 lb/1000 gallons burned
	SO <sub>2</sub> :	142(S) lb/1000 gallons burned
VOM:	0.252 lb/1000 gallons burned	

## Appendix E. Emission Factors and Equations

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Fuel Oil #4	CO:	5 lb/1000 gallons burned
	CO2:	22,300 lb/1000 gallons burned
	METHANE:	0.28 lb/1000 gallons burned
	N2O:	0.11 lb/1000 gallons burned
	NH3:	0.8 lb/1000 gallons burned
	NOX:	47 lb/1000 gallons burned
	PART:	7 lb/1000 gallons burned
	PM10:	6.3 lb/1000 gallons burned
	PM2.5:	3.9 lb/1000 gallons burned
	SO2:	150(S) lb/1000 gallons burned
	VOM:	1.04 lb/1000 gallons burned
Fuel Oil #5	CO:	5 lb/1000 gallons burned
	CO2:	24,400 lb/1000 gallons burned
	METHANE:	1 lb/1000 gallons burned
	N2O:	0.11 lb/1000 gallons burned
	NH3:	0.8 lb/1000 gallons burned
	NOX:	47 lb/1000 gallons burned
	PART:	10 lb/1000 gallons burned
	PM10:	8.6 lb/1000 gallons burned
	SO2:	157(S) lb/1000 gallons burned
	VOM:	1.04 lb/1000 gallons burned
	Fuel Oil #6	CO:
CO2:		25,000 lb/1000 gallons burned
METHANE:		1 lb/1000 gallons burned
N2O:		0.11 lb/1000 gallons burned
NH3:		0.8 lb/1000 gallons burned
NOX:		47 lb/1000 gallons burned
PART:		9.19(S) + 3.22 lb/1000 gallons burned
PM10:		9.19(S) + 3.22 lb/1000 gallons burned
PM2.5:		4.67(A) + 3.22 lb/1000 gallons burned
SO2:		157(S) lb/1000 gallons burned
VOM:		0.28 lb/1000 gallons burned

**S** = weight percentage of sulfur in oil

**A** = percentage of ash in oil

### OTHER FUELS

Butane	CO:	3.6 lb/1000 gallons burned
	CO2:	14,300 lb/1000 gallons burned
	METHANE:	0.2 lb/1000 gallons burned
	N2O:	0.9 lb/1000 gallons burned
	NOX:	21 lb/1000 gallons burned
	PART:	0.6 lb/1000 gallons burned
	PM10:	0.6 lb/1000 gallons burned
	SO2:	0.09(S) lb/1000 gallons burned
	VOM:	0.6 lb/1000 gallons burned

## Appendix E. Emission Factors and Equations

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Propane	CO:	3.2 lb/1000 gallons burned
	CO2:	12,500 lb/1000 gallons burned
	METHANE:	0.2 lb/1000 gallons burned
	N2O:	0.9 lb/1000 gallons burned
	NOX:	19 lb/1000 gallons burned
	PART:	0.6 lb/1000 gallons burned
	PM10:	0.6 lb/1000 gallons burned
	SO2:	0.1(S) lb/1000 gallons burned
	VOM:	0.6 lb/1000 gallons burned

S = Sulfur content expressed in grain/100 feet<sup>3</sup>

### INCINERATORS

Multiple Chamber	CO:	10 lb/ton burned
	HCL	10 lb/ton burned
	NOX:	3.0 lb/ton burned
	PART:	7.0 lb/ton burned
	PM10:	4.7 lb/ton burned
	SO2:	2.5 lb/ton burned
	VOM:	3.0 lb/ton burned
Pathological	CO:	2.95 lb/ton burned
	CO2:	9150 lb/ton burned
	HCL:	1.2 lb/ton burned
	NOX:	3.56 lb/ton burned
	PART:	4.67 lb/ton burned
	PM10:	3.02 lb/ton burned
	PM2.5:	2.02 lb/ton burned
	SO2:	2.17 lb/ton burned
	VOM:	0.299 lb/ton burned
Medical Waste	CD:	0.0054 lb/ton burned
	CO:	2.95 lb/ton burned
	Dioxins/Furans:	0.0000928 lb/ton burned
	HCL:	33.5 lb/ton burned
	Lead:	0.0728 lb/ton burned
	Mercury:	0.107 lb/ton burned
	NOX:	3.56 lb/ton burned
	PART:	4.67 lb/ton burned
	PM10:	3.04 lb/ton burned
	PM2.5:	2.02 lb/ton burned
	SO2:	2.17 lb/ton burned
	VOM:	0.299 lb/ton burned

### DRY CLEANERS, DEGREASERS USING VOLATILE ORGANIC SOLVENTS

$$\frac{(\text{Gallons Solvent} - \text{Gallons Recycled}) \times \text{Weight per Gallon (lb/gal)}}{2,000} = \text{Tons VOM per year}$$

### CHROME PLATING EMISSION FACTORS

## Appendix E. Emission Factors and Equations

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Hard Chrome Plating	CR6:	$1.71 \times 10^{-5}$ lb/hr/amp* per hour
	PART:	$3.57 \times 10^{-5}$ lb/hr/amp* per hour
	PM10:	$3.57 \times 10^{-5}$ lb/hr/amp* per hour
Decorative Chrome Plating	CR6:	$4.71 \times 10^{-6}$ lb/hr/amp* per hour
	PART:	$9.86 \times 10^{-6}$ lb/hr/amp* per hour
	PM10:	$9.86 \times 10^{-6}$ lb/hr/amp* per hour
Anodizing/Electropolishing	CR6:	$2.86 \times 10^{-4}$ lb/hr/ft <sup>2**</sup> per hour
	PART:	$6.00 \times 10^{-4}$ lb/hr/ft <sup>2**</sup> per hour
	PM10:	$6.00 \times 10^{-4}$ lb/hr/ft <sup>2**</sup> per hour

\*Average daily rectifier setting in amps

\*\*Surface area of bath in square feet

Use 1.00 - If **NO** controls are in use.

## Appendix F. Hazardous Air Pollutants (HAPs)

This appendix provides a listing of additional pollutants that are now regulated in accordance with Section 112 of the Clean Air Act as amended in 1990. If your source emits any of these pollutants **and** the pollutant is regulated for your type of source (a specific regulation exists for your type of source), you are required to provide the annual source emissions of those pollutants. Use the pollutant codes in the left-hand column for your entries on the Annual Source Emissions form. Most of the pollutants listed below are also VOM or PART. When reporting the pollutants, also include their totals in the appropriate VOM or PART category. The "ALSO REPORTED AS" column indicates whether or not the pollutant is also VOM or PART. The CAS number is the Chemical Abstracts Services number assigned to that pollutant.

Pollutant Code	Chemical Name	CAS #	Also Reported As
75070	Acetaldehyde	75070	VOM
60355	Acetamide	60355	VOM
75058	Acetonitrile	75058	VOM
98862	Acetophenone	98862	VOM
53963	2-Acetylaminofluorine	53963	VOM
ACROLEIN	Acrolein	107028	VOM
79061	Acrylamide	79061	VOM
79107	Acrylic acid	79107	VOM
107131	Acrylonitrile	107131	VOM
107051	Allyl chloride	107051	VOM
92671	4-Aminobiphenyl	92671	VOM
ANILINE	Aniline	62533	VOM
90040	o-Anisidine	90040	VOM
ASBESTOS	Asbestos	1332214	PART
BENZENE	Benzene	71432	VOM
92875	Benzidine	92875	VOM
98077	Benzotrichloride	98077	VOM
100447	Benzyl chloride	100447	VOM
BIPHENYL	Biphenyl	92524	VOM
117817	Bis(2-ethylhexyl)phthalate (DEHP)	117817	VOM
542881	Bis(chloromethyl)ether	542881	VOM
75252	Bromoform	75252	VOM
106990	1,3-Butadiene	106990	VOM
156627	Calcium cyanamide	156627	-----
CAPTAN	Captan	133062	PART
CARBARYL	Carbaryl	63252	PART
CS2	Carbon disulfide	75150	VOM
CCL4	Carbon tetrachloride	56235	VOM
463581	Carbonyl sulfide	463581	VOM
120809	Catechol®	120809	VOM
133904	Chloramben	133904	VOM
CHLORDANE	Chlordane	57749	VOM
CL	Chlorine	7782505	-----
79118	Chloroacetic acid	79118	VOM
532274	2-Chloroacetophenone	532274	VOM
108907	Chlorobenzene	108907	VOM
510156	Chlorobenzilate	510156	VOM
CCL3	Chloroform	67663	VOM
107302	Chloromethyl methyl ether	107302	VOM
126998	Chloroprene	126998	VOM

## Appendix F. Hazardous Air Pollutants (HAPs)

Pollutant Code	Chemical Name	CAS #	Also Reported As
1319773	Cresols and cresylic acids (mixed)	1319773	VOM
95487	Cresol and cresylic acid (o-isomer)	95487	VOM
108394	Cresol and cresylic acid (m-isomer)	108394	VOM
106445	Cresol and cresylic acid (p-isomer)	106445	VOM
CUMENE	Cumene	98828	VOM
94757	2,4-D, salts and esters	94757	VOM
334883	Diazomethane	334883	VOM
DBF	Dibenzofurans	132649	VOM
96128	1,2-Dibromo-3-chloropropane	96128	VOM
DBP	Dibutylphthalate	84742	VOM
106467	1,4-Dichlorobenzene	106467	VOM
91941	3,3'-Dichlorobenzidine	91941	VOM
111444	Dichloroethyl ether	111444	VOM
DDE	Dichlorodiphenyldichloethylene	3547044	VOM
542756	1,3-Dichloropropene	542756	VOM
62737	Dichlorvos	62737	VOM
111422	Diethanolamine	111422	VOM
64675	Diethyl sulfate	64675	VOM
121697	N,N-Dimethylaniline	121697	VOM
119904	3,3'-Dimethoxybenzidine	119904	VOM
60117	Dimethyl aminoazobenzene	60117	VOM
119937	3,3'-Dimethylbenzidine	119937	VOM
79447	Dimethyl carbamoyl chloride	79447	VOM
DMF	Dimethylformamide	68122	VOM
57147	1,1-Dimethylhydrazine	57147	VOM
131113	Dimethyl phthalate	131113	VOM
77781	Dimethyl sulfate	77781	VOM
534521	4,6-Dinitro-o-cresol, and salts	534521	VOM
51285	2,4-Dinitrophenol	51285	VOM
121142	2,4-Dinitrotoluene	121142	VOM
123911	1,4-Dioxane	123911	VOM
DIOX-FUR	Total Dioxins and Furans	DIOX-FUR	VOM
122667	1,2-Diphenylhydrazine	122667	VOM
106898	Epichlorohydrin	106898	VOM
106887	1,2-Epoxybutane	106887	VOM
140885	Ethyl acrylate	140885	VOM
ETBZ	Ethylbenzene	100414	VOM
51796	Ethyl carbamate (Urethane)	51796	VOM
75003	Ethyl chloride (Chloroethane)	75003	VOM
106934	Ethylene dibromide (Dibromoethane)	106934	VOM
107062	Ethylene dichloride (1,2-Dichloroethane)	107062	VOM
107211	Ethylene glycol	107211	VOM
151564	Ethyleneimine (Aziridine)	151564	VOM
ETO	Ethylene oxide	75218	VOM
96457	Ethylene thiourea	96457	VOM
75343	Ethylidene dichloride (1,1-dichloroethane)	75343	VOM
FORM	Formaldehyde	50000	VOM
76448	Heptachlor	76448	PART
118741	Hexachlorobenzene	118741	VOM
87683	Hexachlorobutadiene	87683	VOM
77474	Hexachlorocyclopentadiene	77474	VOM
67721	Hexachloroethane	67721	VOM

## Appendix F. Hazardous Air Pollutants (HAPs)

822060	Hexamethylene-1,6-diisocyanate	822060	VOM
680319	Hexamethylphosphoramide	680319	VOM
HEXANE	Hexane	110543	VOM
CR6	Hexavalent chrome	7440473	PART
302012	Hydrazine	302012	VOM
HCL	Hydrochloric acid (Hydrogen Chloride gas only)	7647010	-----
HF	Hydrogen fluoride (Hydrofluoric acid)	7664393	-----
123319	Hydroquinone	123319	VOM
78591	Isophorone	78591	VOM
LINDANE	Lindane (all isomers)	58899	PART
108316	Maleic anhydride	108316	VOM
MEOH	Methanol (Methyl Alcohol)	67561	VOM
72435	Methoxychlor	72435	PART
74839	Methyl bromide (Bromomethane)	74839	VOM
74873	Methyl chloride (Chloromethane)	74873	VOM
TCA	1,1,1-Trichloroethane (Methyl Chloroform)	71556	-----
60344	Methyl hydrazine	60344	VOM
74884	Methyl iodide (Iodomethane)	74884	VOM
MIBK	Methyl isobutyl ketone (Hexone)	108101	VOM
624839	Methyl isocyanate	624839	VOM
80626	Methyl methacrylate	80626	VOM
MTBE	Methyl t-butyl ether	1634044	VOM
101144	4,4-Methylene bis(2-chloroaniline)	101144	VOM
MC	Methylene Chloride (Dichloromethane)	75092	-----
MDI	4,4'-Methylene diphenyl diisocyanate	101688	VOM
101779	4,4'-Methylenedianiline	101779	VOM
91203	Naphthalene	91203	VOM
98953	Nitrobenzene	98953	VOM
92933	4-Nitrobiphenyl	92933	VOM
100027	4-Nitrophenol	100027	VOM
79469	2-Nitropropane	79469	VOM
684935	N-Nitroso-N-methylurea	684935	VOM
62759	N-Nitrosodimethylamine	62759	VOM
59892	N-Nitrosomorpholine	59892	VOM
PARATHION	Parathion	56382	VOM
82688	Pentachloronitrobenzene (Qunitobenzene)	82688	PART
87865	Pentachlorophenol	87865	PART
PERC	Perchloroethylene (Tetrachloroethylene)	127184	-----
PHENOL	Phenol	108952	VOM
106503	p-Phenylenediamine	106503	VOM
PHOSGENE	Phosgene	75445	VOM
7803512	Phosphine	7803512	VOM
P	Phosphorus	7723140	-----
85449	Phthalic anhydride	85449	VOM
PCB	Polychlorinated biphenyls (Aroclors)	1336363	VOM
1120714	1,3-Propane sultone	1120714	VOM
57578	beta-Propiolactone	57578	VOM
123386	Propionaldehyde	123386	VOM
114261	Propoxur (Baygon)	114261	VOM
78875	Propylene dichloride (1,2-Dichloropropane)	78875	VOM

## Appendix F. Hazardous Air Pollutants (HAPs)

Pollutant Code	Chemical Name	CAS #	Also Reported As
PO	Propylene oxide	75569	VOM
75558	1,2-Propylenimine (2-Methyl aziridine)	75558	VOM
QUINOLINE	Quinoline	91225	VOM
QUINONE	Quinone	106514	VOM
STYRENE	Styrene	100425	VOM
96093	Styrene oxide	96093	VOM
2378TCDD	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016	VOM
79345	1,1,2,2-Tetrachloroethane	79345	VOM
7550450	Titanium tetrachloride	7550450	-----
TOLUENE	Toluene	108883	VOM
95807	Toluene-2,4-diamine	584849	VOM
TDI	2,4-Toluene diisocyanate	584849	VOM
95534	o-Toluidine	95534	VOM
TOXAPHENE	Toxaphene (chlorinated camphene)	8001352	VOM
120821	1,2,4-Trichlorobenzene	120821	VOM
79005	1,1,2-Trichloroethane	79005	VOM
TCE	Trichloroethylene	79016	VOM
95954	2,4,5-Trichlorophenol	95954	VOM
88062	2,4,6-Trichlorophenol	88062	VOM
121448	Triethylamine	121448	VOM
1582098	Trifluralin	1582098	VOM
540841	2,2,4-Trimethylpentane	540841	VOM
108054	Vinyl acetate	108054	VOM
593602	Vinyl bromide	593602	VOM
VC	Vinyl chloride	75014	VOM
75354	Vinylidene chloride (1,1-Dichloroethylene)	75354	VOM
XYLENE	Xylenes (mixed)	1330207	VOM
XYLENE-M	Xylene (m-isomer)	108383	VOM
XYLENE-O	Xylene (o-isomer)	95476	VOM
XYLENE-P	Xylene (p-isomer)	106423	VOM
<b>COMPOUNDS*:</b>			
SBC	Antimony compounds		PART
ASC	Arsenic compounds (inorganic including arsine)	7440382	PART
BEC	Beryllium compounds	7440417	PART
CDC	Cadmium compounds		PART
CRC	Chromium compounds		PART
COC	Cobalt compounds		PART
COG	Coke Oven gases		-----
CNC	Cyanide compounds		-----
GLYET	Glycol Ethers		VOM
LEADC	Lead compounds		PART
MNC	Manganese compounds	7439965	PART
HGC	Mercury compounds	7439976	-----
MINFIBER	Fine mineral fibers		-----
NIC	Nickel compounds		PART
POM	Polycyclic organic matter		-----
RAD	Radionuclides (including radon)		-----
SEC	Selenium compounds		PART

\* A unique chemical substance containing the named chemical as part of its infrastructure.