Annual Emission Report Instructions

Due Date: May 1st of the year following the calendar year in which the emissions took place

Mail Completed Reports to:

Illinois EPA
Bureau of Air
Air Quality Planning Section (#39)
2520 West Iles Avenue
Springfield, IL 62704
Attn: Annual Emission Report

www.epa.state.il.us/air/aer

Email questions to: EPA.AERQuestions@illinois.gov

Useful Web Sites

Annual Emission Reports

https://epa.illinois.gov/topics/air-quality/planning-reporting/annual-emission-reports.html

AER Rule

https://pcb.illinois.gov/documents/dsweb/Get/Document-11948/

Illinois EPA

www.epa.illinois.gov

Illinois EPA ROSS (Registration of Smaller Sources) Program

www.illinois.gov/dceo/SmallBizAssistance/EnvironmentalAssistanceProgram/Pages/default.aspx

USEPA

www.epa.gov

USEPA Emission Inventory Page

www.epa.gov/air-emissions-inventories

USEPA Emission Factors Page

www.epa.gov/chief

AP-42 (USEPA)

www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors

WebFIRE (USEPA emission factors)

www.epa.gov/electronic-reporting-air-emissions/webfire

Emission Estimation Tools/Software (USEPA)

www.epa.gov/air-emissions-factors-and-quantification/emissions-estimation-tools

USEPA Greenhouse Gas Reporting

www.epa.gov/ghgreporting

NAICS Codes Listing (and SIC)

www.census.gov/eos/www/naics

Section 1 – General Instructions and Questions

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 which 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 applies to any source who meets at least one of the following criteria.

- Sources permitted to emit 25 tons per year or more of any combination of regulated air pollutants. Greenhouse gases are not included in this total.
- 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.

"Short" - Plant–wide emissions. These are sources that do not fall into the "long" category.

☼ ROSS sources are not required to submit annual emission reports as long as they have registered.

DO I HAVE TO FILE?

If you have, or are required to have, a State of Illinois 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 Clean Air Act as amended in 1990 (CAA). The original provisions requiring the filing of Annual Emission Reports are contained in 35 Ill. Adm. Code Sections 201.302(a) and 201.302(b). These requirements as well as those required by the Clean Air Act as amended in 1990 are contained in 35 Ill. Adm. Code Part 254.

WHY ARE CO2, METHANE AND N2O 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_2), methane, nitrous oxide (N_2O) and the other greenhouse gas pollutants.
Emissions for these pollutants have been precalculated for you based on other information you have previously submitted or previously reported emissions. Required reporting of these emissions (other than those sources already required to report methane emissions) began with the 2011 reporting year.

☼ The emission factors provided on the calculation pages of the AER web site are the default AP-42 emission factors. We are providing these for sources who are not required to submit greenhouse gas data to USEPA. For sources who are required to report greenhouse gas emissions to USEPA, we prefer sources report emissions to us using the same calculation methodology that was used to report to USEPA.

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.

☼ Reports must be postmarked by May 1st. If that date falls on a weekend or holiday, the report must be postmarked by the next workday.

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 proper forms. We can send you paper forms or e-mail you a PDF version of the report.

HOW DO I CONTACT THE IEPA?

Questions regarding the Annual Emission Report should be directed to AER staff at 217-785-1712. Please have your ID Number (see Section 3) before you call.

HOW DO I REQUEST CONFIDENTIALITY?

Certain information requested in the Annual Emission Report forms may be claimed as trade secret, privileged information, or confidential only if the information does not represent "emissions data" as described in 40 CFR 56.7042 (1991). All claims of trade secret must comply with 35 Ill. Adm. Code 130,
Procedures for Claiming and Determining Trade Secrets. A claim of trade secret for data contained in an Annual Emission Report applies only to that report and must accompany the report. Any information which is claimed as a trade secret in the Annual Emission Report which also appears in other documents submitted to the IEPA (such as permit applications), must be claimed under separate letter. A separate, edited version of the Annual Emission Report, omitting the confidential information, must be submitted to the IEPA to provide a version of the report which may be inspected by the public.

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. See AER web page for entire list.

Greenhouse Gas Pollutants (must be reported individually – no CO2e)

- CO2 – Carbon dioxide
- METHANE – Methane
- N2O – Nitrous Oxide
- SF6 – Sulfur hexafluoride
- Other individual CFCs and HFCs. See AER web page for entire list

MUST I REPORT FUGITIVE EMISSIONS?

Yes. Fugitive VOM emissions from permitted emission units must be reported by **all** facilities. Fugitive VOM emission sources include valves, pumps, seals, flanges, leaks, and solvent clean-up operations. Annual source totals of fugitive Particulate 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
- DuPage – Addison, Winfield, York
- Will – DuPage, Plainfield, Lockport, Channahon, Peotone, Florence, Joliet
- Peoria – Richwoods, Limestone, Hollis, Peoria, City of 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

Your permit may include fugitive (particulate and/or VOM) emission sources, these need to be reported also.
The types of particulate 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, PM10, and PM2.5 emissions must be identified and reported on the ANNUAL SOURCE EMISSIONS page. The total VOM, PART, PM10, PM2.5 emission values are to include both the fugitive and non-fugitive values. For

example, if a source had 95 tons per year of non-fugitive PART emissions and 20 tons per year of fugitive emissions, 115 tons per year of PART emissions would be reported on the ANNUAL SOURCE EMISSIONS page, along with 20 tons per year identified as fugitive PART emissions.

WHAT OTHER INFORMATION MUST BE REPORTED?

Your permit may contain conditions specifying additional data or certification requirements that must be provided with the annual emission report. For example, your permit may require the number of engine start-ups to be reported with the annual emission report. You should review your permit before completing the annual emission report to insure you are providing all the necessary information.

☼ Do not include checks. Your company is always sent a bill first.

☼ Do not include reports that are to be sent to the Compliance Section. Send them to the Compliance Section. This is certainly true of CAAPP Annual Compliance Certifications.
☼ Do not include other reference data such as calculations or output from TANKS unless it is required to be submitted by your permit.

THE REPORT YOU SENT ME DOES NOT INCLUDE SOME OF MY EMISSION UNITS. WHAT SHOULD I DO?

Blank forms may be obtained by downloading them from the Illinois EPA website. Please complete the appropriate form for the type of emission unit that was omitted. Remember, equipment that doesn't need a permit is not required to be reported. In addition, as the rule indicates, insignificant activities at Title V sources are not required to be reported.

I NEED ADDITIONAL HELP. WHAT SHOULD I DO?

Persons knowledgeable about the Annual Emission Report can be reached at 217-785-1712. Please ask for someone dealing with the Annual Emission Report. It will 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 facility ID number. A staff member will return your call as soon as possible. **This may be several days during peak periods, so please be patient.**

WHERE DO I SEND THE EMISSION REPORT?

After the Annual Emission Report has been completed and signed, mail it to the address below:

Illinois EPA
Bureau of Air
Air Quality Planning Section (#39)
2520 West Iles Avenue
Springfield, IL 62704 Attn: Annual Emission Report

WHEN SHOULD I CONTACT THE PERMIT SECTION?

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

- To add an emission unit.
- 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 equipment is exempt from permit requirements.

HOW CAN I CONTACT THE PERMIT SECTION?

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

Illinois EPA
Division of Air Pollution Control
Permit Section (#11)
2520 West Iles Avenue
Springfield, IL 62704
Telephone: 217-785-1705

When calling the Permit Section, please inform the person answering the telephone of the county in which your source is located, as well as the type of activity in which your source in involved, i.e., chemical manufacturing, printing, petroleum, etc. This will aid the receptionist in directing your call to the proper permit analyst.

Section 2 – IEPA Supplied Reports

SOURCE INVENTORY REPORT

The IEPA provides each source with a preprinted "Source Inventory Report" (Annual Emission Report). The report forms contain data fields the source is required to verify or complete to fulfill its annual reporting requirements. The composition of the report will vary, depending upon whether the source is required to file a Summary or Detailed Annual Emission 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 Annual Emission 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 form. Fugitive VOM,

PART, and PM10 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 sources to provide supplemental data with the annual emission report.
If there are any errors present, such as incorrect permit status or expiration date, contact the Division of Air Pollution Control, Permit Section to have the discrepancies corrected.

DETAILED ANNUAL EMISSION REPORT

Sources required to file the Detailed Annual Emission Report may have one or more of the following forms in their Source Inventory Report, depending upon the particular configuration of the facility:

- Fuel Combustion Data form
- Process Unit Data form
- Storage Tank Data form
- Other Emission Units Data form
- Control Device Data form
- Stack Data form
- Coating and Solvent Use Data form
- Startup/Shutdown/Malfunction Data form

Section 3 – Emission Summary Report

GENERAL INSTRUCTIONS

Each person reporting should carefully follow the instructions contained herein and complete the appropriate sections of the Annual Emission Report as required. Every effort should be made to accurately determine the required data and guessing should be avoided. 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 field) 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. It is rare that a piece of information with be N/A.

If all the data for a given section of the report cannot be listed on the form provided, use additional copies of the required forms that are available on the IEPA website. In the upper right-hand corner of each sheet, indicate page numbers as "Page X of Y," where X is the number of the page being added and Y is the total number of pages in that particular section.

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.

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
- Annual Emission Report mailing address
- E-Mail address (optional)
- Contact person information
- 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

Any optional data you provide will be included on subsequent Annual Emission Reports.

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 Division of Air Pollution Control (DAPC) and is included on your permit. The first three digits represent the county in which your source is located. The second three digits represent the city/township in which your source is located. The last three digits uniquely identify your source within that city/township. 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.

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 (**D**ata **U**niversal **N**umbering **S**ystem).

LATITUDE and LONGITUDE

The latitude and longitude parameters are the locational coordinates of your source. Only update these values if you feel they are incorrect.

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. Depending upon its operation, a source may have more than one SIC code. Up to three separate codes may be used. If corrections or additions are necessary in the SIC codes, please do so in the spaces provided on the form. You can provide either SIC or NAICS and we will convert to the other.

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. If corrections or additions are necessary, please do so in the spaces provided on the annual emission report forms. You can provide either SIC or NAICS and we will convert to the other.

SOURCE ADDRESS

This is the address of the physical location of your source. **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 can be different from the Source Address. Post Office box numbers may be used. The contact person should be the person to whom the Annual Emission Report is to be sent. If corrections are necessary in the Annual Emission Report Mailing Address, please do so in the space provided on the form to the right.

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.

☼ When certifying to "... the information submitted is, to the best of my knowledge and belief, true, accurate and complete," we take this to mean that you are certifying for the data you have reported for that specific year. You are not certifying to the data we have pre-printed on the forms for data reported in the previous year or our estimates.

ANNUAL SOURCE EMISSIONS FORM

Total emissions (in tons per year) of all regulated pollutants from your source during the reporting year must be listed on this form. Space has been provided for adding any pollutants your source emitted that are not preprinted on the form.

SOURCE REPORTED EMISSIONS FOR THE REPORTING YEAR

Space has been provided for you to report emissions for each pollutant, in tons per year. Enter a figure in the space 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 the reported emissions on the blank, unused portion of the form. Fugitive VOM, PART, and PM10 emissions, as well as hazardous air pollutants, may be listed separately, in a similar manner.

When reporting emissions that are metals, we prefer you report the emissions of the pure metal and not the "compounds" total. That is, we prefer you report "nickel" instead of "nickel compounds". For example, if you emitted two tons of manganese oxide (MnO), you should report emissions of 1.55 tons of manganese. This is accomplished by calculating the fraction of the compound that is the metal and multiplying it by the total emissions. In this example, the atomic weight of manganese is 55 and that of oxygen is 16. That is a total of 71. Manganese makes up 77.5% (55/(55+16)) of the compound so the final emissions are 0.775 x 2 tons.

When completing the Detailed Annual Emission Report, the annual, source-reported emissions of individual pollutants should be reflective of the hourly emission rates reported for individual points that emit those pollutants. For example, if you are reporting that your facility emitted 20 tons of NOx as the annual source total, the total hourly

emissions of NOx (from all emission points capable of emitting NOx) times the total operating hours (of all such emission points) divided by 2000 should equal 20 tons of NOx. In addition, any pollutant identified/reported on this page should also be reported for at least one emission unit (when submitting the Detailed Annual Emission Report).

ALLOWABLE EMISSIONS
The allowable emissions column was removed from the report starting with the 2016 reporting year.

EMISSIONS REPORTED FOR LAST YEAR
The emissions (in tons per year) reported by your facility on the last annual emission report.

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. Average emission rate data is typically obtained from permit applications.

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. This form is provided for your information and it is not necessary to return the permit listing form to the IEPA.

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.

TYPE OF PERMIT
The type of permit for the source. Types of permits will be "Operating," "Construction," "FESOP," (Federally Enforceable State Operating Permit), “Title V,” "Lifetime”, “Joint” (construction and operating together), or “Simple".

OPERATION NAME
The Operation Name is a description of the equipment covered by the permit

PERMIT STATUS - The current status of a permit. 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 and Lifetime permits do not have expiration dates.

If you are required to submit the Short Report (4 or so pages), you may stop here and submit your report once completed. The following instructions are for sources who are required to submit the long report.

Section 4 – Common Data Fields for Emission Units

EMISSION UNIT (POINT) NUMBER

Each emission unit (point) is identified by a unique, four-digit number assigned by the DAPC. **Emission unit numbers are not to be changed.** If you are using the blank forms to submit a new emission unit, use a character such as A, or B, to identify the added emission units. The IEPA will assign a proper number when the data is entered into the DAPC database.

☼ Our computer system assigns this value automatically so we have no control over its creation.

EMISSION UNIT DESCRIPTION

A description follows each Emission Unit Number. Each Emission Unit (point) must have an accompanying description. Space is provided to correct the Emission Unit Description, however, please do not change the description to a different type of emission unit. For example, do not change a boiler to a storage tank. Changes to the Emission Unit Description should only be made to better describe the emission unit, e.g., "KEWANEE GAS FIRED BOILER" instead of "BOILER."

☼ When adding emission units to our database, we almost always default to the descriptions and groupings of emission units as describe in your permit. This way we can make sure you are reporting the required emission units. If there are identifiers you use at your individual source, please feel free to add them to the report and we will make the changes.

POINT BEGAN OPERATION

The date the emission unit began operation, stated in month and year.

POINT CEASED OPERATION

The date the emission unit was removed (if applicable), stated in month and year. If an emission point has ceased operation, you should have your permit updated.

☼ Only use this field if the equipment has been removed and will never operate again.

MODE NUMBER

A unique identification number is assigned to each mode of operation of an emission unit. These numbers are assigned sequentially from 01 up to a maximum of 99. Mode Numbers are **not** to be changed. A mode of operation can be thought of as a "method" of operation of an emission unit. For example, consider a boiler that operates on natural gas part of the year and fuel oil the other part of the year. A Mode Number of 01 could represent operating

parameters during natural gas usage, while a Mode Number of 02 could represent operating parameters during fuel oil usage. For storage tanks, a Mode Number of 01 could represent breathing loss emissions, while a Mode Number of 02 could represent emissions during filling of the tank (working loss). For process emission units, consider a reactor, for example. A Mode Number of 01 could represent operating parameters during loading of raw materials, while a Mode Number of 02 could represent operating parameters during the reaction phase of the process. If you have emission units with more than one mode of operation, a separate form will be printed and supplied to you for each mode. The Emission Unit number will be repeated (remain the same) for each mode of operation.

MODE DESCRIPTION

A description of the mode of operation follows the Mode Number. A Mode Number may or may not have an accompanying Mode Description. Emission units that have only one mode of operation do not require a mode description. However, a mode description is required for each mode of operation for emission units that have multiple modes of operation. Space is provided to correct the mode description. Please do not change the description to a different type of mode. Changes to the Mode Description should only be made to better describe the mode of operation, e.g., "REACTOR LOADING" instead of "REACTOR."

PERMIT NUMBER

This is the operating permit number that includes the emission unit. Please do not make changes to this field.

SCC NUMBER

Source Classification Codes (SCC) provide a means for identifying a process or function logically associated with a source of air pollution emissions. SCC numbers are used to uniformly identify similar emission units or processes. Emission units with multiple modes of operation may have different SCC numbers for each mode. SCC numbers are assigned by the Agency and should not be changed on the form unless a more appropriate SCC number can be substituted.

☼ Apparently there is no longer a good link to a downloadable list of SCC codes that is available to the public. Many sections of AP-42 do provide the SCC code. See www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors.

PERCENT THROUGHPUTS

The weighted percentage of yearly activity of the mode of operation for the four seasonal periods. The sum of the four periods must total 100%.

MODE BEGAN OPERATION

The date the mode of operation unit began operation stated in month and year.

MODE CEASED OPERATION

The date the mode of operation ceased to operate, if applicable, stated in month and year.

If the emission unit is shut down, there is no need to place a data here.

UNITS

The units in which the operating rate data are provided (e.g., million cubic feet burned, tons processed, etc.)

ANNUAL OPERATION

This portion of the form provides data fields to record operating schedules, raw material usage, or fuel usage rates during the reporting year. Four data fields are provided to record the operating schedule for hours/day, days/week, weeks/year, and hours/year. One data fields is provided to record the operating rate/hour in the units expressed directly above the ANNUAL OPERATION box.

HOURS/DAY

The number of hours per day the emission unit operated. The values for hours/day can range from 0 to 24.

DAYS/WEEK

The number of days per week the emission unit operated. The value for days/week can range from 0 to 7.

WEEKS/YEAR

The number of weeks per year the emission unit operated. The values for weeks/year can range from 0 to 52 and may not include fractional weeks.

HOURS/YEAR

The actual number of hours the emission unit's mode operated during the year. The operating hours can range from 0 – 8760 hours/year.

☼ Make sure that the hours/year value comes close to the value of hours/day times days/week times weeks/year.

RATE/HR

The operating rate of the mode per hour, day and year, respectively, expressed in the units provided above the Annual Operation Box. Space has been provided on the form to change the rates, however, make sure the rates are expressed in the units provided.

PEAK OZONE SEASON OPERATION

These data fields are to be completed only for emission units that emit NOx or VOM. The data fields are provided to record the operating hours per day, days per week, weeks per year and total hours per year of the mode of operation during the peak ozone season. The peak ozone season is the months of June, July, and August.

HOURS/DAY

The number of hours per day the emission unit operated during the peak ozone season. The values for hours/day can range from 0 to 24.

DAYS/WEEK

The number of days per week the emission unit operated during the peak ozone season. The value for days/week can range from 0 to 7.

WEEKS/SEASON - The number of weeks the emission unit operated during the peak ozone season. The values for weeks/year can range from 0 to 13 and may not include fractional weeks.

HOURS/SEASON

The actual number of hours the emission unit's mode operated during the peak ozone season. The operating hours can range from 0 – 2208 hours/year

START TIME

The time at which the emission unit started operation during the day for the peak ozone season. The time is expressed in military time. For example, 3:00 p.m. is represented by 1500 and 2:00 a.m. is represented by 0200. If the emission unit operated on a continuous, 24-hour basis, the start time is 0000.

END TIME

The time at which the emission units ended operation during the day for the peak ozone season. The time is expressed in military time. For example, 3:00 p.m. is represented by 1500 and 2:00 a.m. is represented by 0200. If the emission unit operated on a continuous, 24-hour basis, the end time is 2359.

RATE/HR

The peak ozone season operating rate of the mode per hour expressed in the units provided above the Peak Ozone Season Operation Box. Space has been provided on the form to change the rates, however, make sure the rates are expressed in the units provided.

EMISSION RATE DATA

Pollutants emitted by the emission unit/mode are listed alphabetically on this page, with emission factors (if used), emission rates as calculated by IEPA, and the emission rates previously reported by your facility. The emissions rates are based upon average **controlled** emission rates of that pollutant from the emission unit to the atmosphere in units of pounds per hour. Space is provided on the form for you to correct, revise, or update the preprinted IEPA emission factors and rates for each pollutant. NOTE: All regulated pollutants may not currently be preprinted on the form. If necessary, write in pollutant emission rate data on the form or use a blank form. Any such information will then be included on subsequent Annual Emission Reports**.**

POLLUTANT CODE

A code used to represent the pollutant being emitted. Common codes include (but are not

limited to):

- CO – Carbon Monoxide
- CO2 – Carbon Dioxide
- LEAD – Lead
- MC – Methylene Chloride
- METHANE – Methane
- N2O – Nitrous Oxide
- NH3 – Ammonia
- NOX – Nitrogen Oxides
- PART – Particulate Matter
- PM10 – Particulate Matter < 10 microns
- PM2.5 – Particulate Matter < 2.5 microns
- PERC – Perchloroethylene
- SO2 – Sulfur Dioxide
- TCA – 1,1,1-Trichloroethane
- VOM – Volatile Organic Material

Pollutant codes not preprinted on the form may be written in on the form**.**

METHOD

A code describing the method used to calculate or estimate emissions. Acceptable codes are:

- 1 - Source tests or other measurements
- 2 - Material balance
- 3 - Standard (AP-42) emission factor
- 4 - Engineering estimate
- 5 - Special emission factor (not AP-42)

The method code shown under the IEPA heading indicates the method used by IEPA to estimate the IEPA emission rate (see below). The code shown under the REP heading indicates the method previously reported by your facility. If corrections in the METHOD field are necessary, please do so in the underscored space provided on the form.

EMISSION FACTORS

The relationship between the amount of pollution produced and an operating parameter (amount of fuel burned, amount of product produced, etc.). The publication, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, No. AP-42* contains the preferred emission factors to use in estimating emissions. Another USEPA document, *FIRE Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants* provides emission factors for SCC numbers. Often, an emission factor will be identified in your permit.

Emission factors listed under the IEPA heading indicate the factors (if used) by IEPA to estimate the IEPA emission rate (see below). The emission factors listed under the REPORTED heading are factors previously reported by your facility. If corrections are needed to the emission factors, please do so in the underscored space provided**.**

IEPA EMISSION RATE

The amount of a pollutant released to the atmosphere after taking into account any control devices present**.** This emission rate has the units of pounds/hour and reflects the IEPA-

estimated emission rate for the particular emission unit.

EMISSION RATE REPORTED
The emissions of each pollutant, in pounds per hour, reported by the facility in previous annual emission reports. Corrections or updates to reported emission rates should be entered in the space provided.

OZONE SEASON EMISSION DATA
The IEPA-estimated previously reported, and current emissions of NOx and/or VOM in pounds per hour, of the emission unit/mode during the peak ozone season (June, July, and August). See preceding paragraphs for descriptions of pollutant code, estimation method, emission factor and previously reported emissions.

CAPTURING CONTROLS
This is a list of each control device that captures emissions directly from the emission unit/mode. Each control device is identified by a unique, four-digit number. Control numbers are assigned sequentially, from 0001 up to a maximum of 9999. Capturing control numbers may be changed.

CAPTURING STACKS
This is a list of each stack that captures emissions directly from a particular emission unit/mode. The DAPC database assigns a unique, four-digit number to each point at which emissions reach the atmosphere. This may be a physical stack or simply a release point. Stack numbers are assigned sequentially, from 0001 up to a maximum of 9999. Capturing stack numbers may be changed.

CAPTURE EFFICIENCY
The percentage of emissions from the emission unit/mode captured by the control device or stack. This field does not refer to the percentage of emissions removed by the control device (see REMOVAL EFFICIENCY in Section 9). Space has been provided on the form to correct capture efficiencies. The sum of all capture efficiencies of a mode may not add up to more than 100%.

Section 5 – Fuel Combustion Data Form

GENERAL INFORMATION
Fuel combustion emission units are primarily composed of boilers, furnaces, and similar equipment, where combustion of fuel oil, coal, wood, coke, natural or process gas, etc. takes place for power generation or commercial/institutional and industrial processing purposes. This section of the Annual Emission Report provides data fields for combustion information necessary for the estimation of emissions

In completing this form, the following information **must** be provided (or verified) for each permitted emission unit:

- Emission unit description

- Percent throughputs
- Fuel type
- Heat input
- Heat content of fuel
- Sulfur content of fuel (if applicable)
- Ash content of fuel (if applicable)
- Nitrogen content of fuel (if applicable)
- Typical operating data:
    - hours/day
    - days/week
    - weeks/year
    - rate/hour
- Peak ozone season operating data (if applicable):
    - hours/day
    - days/week
    - weeks/season
    - rate/hour
- Pollutant emission rates
- Peak ozone season VOM and/or NOx emission rates (if applicable)
- Emission estimate methods
- Emission factors (if applicable)
- Verification of capturing controls and capturing stacks
- Capture Efficiencies

Optional information on this form includes:

- Began operation dates
- Ceased operation dates
- Typical operating data:
    - hours/year
- Peak ozone season data:
    - hours/season
    - start time
    - end time

FUEL TYPE

A code is used to represent the type of fuel used in combustion emission units. Valid codes include:

1 - Natural Gas
2 - Butane
3 - Propane
4 - Butane/Propane Mix
5 - Process Gas
6 - Landfill Gas
7 - Coke Oven Gas
9 - Other Gaseous Fuel
20 - Distillate Oil - Grade #1
21 - Distillate Oil - Grade #2
22 - Residual Oil - Grade #4
23 - Residual Oil - Grade #5
24 - Residual Oil - Grade #6
25 - Kerosene
26 - Jet Fuel
27 - Waste Oil
28 - Waste Solvents
29 - Other Oil/Petroleum/Liquid
40 - Coal - Bituminous

41 - Coal - Anthracite
42 - Coal - Sub bituminous
43 - Wood
44 - Municipal Solid Waste
45 - Municipal Solid Waste and Coal 49 - Other Solid Waste
60 - Dual Fuel Gas/Liquid
61 - Dual Fuel Gas/Solid
62 - Dual Fuel Liquid/Solid 69 - Other Dual Fuel
99 - Other

In the cases where the fuel is of an 'other' type, please specify the fuel in the mode description field.

HEAT INPUT
The maximum rated heat input of the combustion unit. This value is always expressed in million BTUs per hour.

HEAT CONTENT
The heat content of the fuel. Provide the units of the heat content (e.g. BTU/gal)

SULFUR CONTENT
The sulfur content of the fuel expressed as a percentage, by weight, of the fuel. This information is required for combustion emission units that use oil, coal, or process gas. It is assumed that sulfur content is negligible for other gaseous fuels.

ASH CONTENT
The ash content of the fuel expressed as a percentage, by weight, of the fuel. This information is required for combustion emission units that use coal. It is assumed that ash content is negligible for gaseous and oil fuels.

NITROGEN CONTENT
The nitrogen content of the fuel expressed as a percentage, by weight, of the fuel. This information is required for combustion emission units that use oil, coal or process gas.

Section 6 – Process Data Form

GENERAL INFORMATION
Process emission units are primarily associated with some part of a manufacturing process. The type of emission units covered by this report can vary widely. Process emission units can be distinguished from other types of emission units because, in most cases, material enters the emission unit, some operation is done on that material and the processed material leaves the emission unit, either as product or to be further processed.

In completing this form, the following information **must** be provided (or verified) for each permitted emission unit:

- Emission unit description

- Percent throughputs
- Typical operating data:
    - hours/day
    - days/week
    - weeks/year
    - rate/hour
- Peak ozone season operating data (if applicable):
    - hours/day
    - days/week
    - weeks/season
    - rate/hour
- Pollutant emission rates
- Peak ozone season VOM and/or NOx emission rates (if applicable)
- Emission factors (if applicable)
- Emission estimate methods
- Verification of capturing controls and capturing stacks
- Capture Efficiencies

Optional information on this form includes:

- Began operation dates
- Ceased operation dates
- Typical operating data:
    - hours/year
- Peak ozone season data
    - hours/season
    - start time
    - end time

TYPICAL OPERATION PWR

Process weight rate (PWR) is the total amount of raw materials processed by an emission unit per hour. For process emission units that are not continuous, the process weight rate is the total amount of raw material used divided by the operating time for one cycle. The units of the process weight rate are **always** pounds per hour. These units cannot be changed. For a more detailed definition of process weight rate, see 35 Ill. Adm. Code 211.

Section 7 – Storage Tank Data Form

GENERAL INFORMATION

Storage tanks are contributors of volatile organic material emissions. These emissions are generally a result of tank breathing and working losses. Breathing losses result from vapor volume and pressure variations caused by daily temperature changes. Working losses occur during tank filling operations when vapors are displaced from the tank as the liquid surface rises. This section of the Annual Emission Report provides data fields for information related to storage tank capacity, vapor pressure of the material stored and characteristics of the storage tank. This information can be used to calculate emissions.

In completing these forms, the following information **must** be provided (or verified) for each permitted storage tank:

- Emission unit description
- Percent throughputs
- Typical operating data:
    - hours/day
    - days/week
    - weeks/year

    - rate/hour
    - input volume
- Peak ozone season operating data (if applicable):
    - hours/day
    - days/week
    - weeks/season
    - rate/hour
    - input volume
- Material information:
    - material stored
    - molecular weight
    - density
    - vapor pressure
- Typical VOM emission rates
- Peak ozone season VOM emission rates (if applicable)
- Emission factors (if applicable)
- Emission estimate methods
- Verification of capturing controls and capturing stacks
- Capture efficiencies

Optional information on this form includes:

- Began operation dates
- Ceased operation dates
- Tank information:
    - tank type
    - capacity
    - diameter
    - height
    - vapor space
    - temperature
    - color
    - paint condition
    - location
    - seal type (if applicable)
    - support type (if applicable)
- Typical operating data:
    - hours/year
- Peak ozone season data:
    - hours/season
    - start time
    - end time

☼ Much of the following physical data about the storage tank requested was meant for future use of having a source provide the data and then have our computer system calculate emissions. USEPA changed the procedure for calculating storage tank emissions (i.e., TANKS) and the simple equation we had planned on using was no longer applicable. While required data, we will not be focusing too much on the physical parameters. Although, having the capacity of the tank would be nice.

TANK TYPE

A short description of the type of storage tank. Tank types might include: fixed roof, internal floating roof, external floating roof, pressure tank, variable vapor space tank, etc. Space has been provided for changes to the tank type description.

CAPACITY
The storage capacity of the tank in gallons.

DIAMETER
The inside diameter of the tank in feet.

HEIGHT
The height of the tank in feet.

VAPOR SPACE
The average distance between the top of the liquid surface and the top of the tank expressed in feet.

TEMPERATURE
The average temperature at which material is stored in the tank in units of degrees Fahrenheit.

COLOR
The external paint color of the tank. Some examples include: white, aluminum (specular), aluminum (diffuse), gray, green, black, etc.

PAINT CONDITION
A description of whether the paint condition is GOOD or FAIR.

LOCATION
A description of whether the tank is above ground or below ground.

SEAL TYPE
A description of the type of tank seal for tanks with floating roofs. Typical entries in this field might include:

- mechanical shoe seal - primary only
- mechanical shoe seal - shoe mounted secondary seal
- mechanical shoe seal - rim mounted secondary seal
- resilient seal - liquid mounted primary only
- resilient seal - weather shield
- resilient seal - rim mounted secondary seal
- resilient seal - vapor mounted primary only
- resilient seal - vapor mounted weather shield

SUPPORT TYPE
A description of the type of support for tanks with floating roofs. Typical entries in this field might include:

- self-supported roof with no internal support columns
- column supported - construction type not specified
- column supported - 9" X 7" columns
- column supported - 8" diameter columns

MATERIAL STORED
The chemical name or trade name of the material stored in the tank.

MOLECULAR WEIGHT
The molecular weight of the material stored in the tank in units of pounds per pound mole. For example, ethanol has two carbon atoms (weight = 12), one oxygen atom (weight = 16) and six hydrogen atoms (weight = 1). The molecular weight would be 2 x 12 + 1 x 16 + 6 x 1 = 46 lb/lb mole.

DENSITY
The density of the material stored in the tank expressed in pounds per gallon.

VAPOR PRESSURE
The vapor pressure of the material stored in the tank in units of pounds per square inch, absolute (psia) at the temperature at which the material is stored.

INPUT VOLUME
The total amount of material that entered the tank during the reporting year in units of gallons.

PEAK OZONE SEASON INPUT VOLUME
The total amount of material that entered the tank during the reporting year for the months of June, July and August in units of gallons.

Section 8 – Other Emission Unit Data Form

GENERAL INFORMATION
The type of emission unit covered by this report varies widely. This report is used to represent emission units that do not fall into the fuel combustion, process or storage tank categories. Fugitive emission units, such as printing presses cleanup operations, valve and pump leaks, relief valves, connectors, etc., are examples of the type of emission units that might be included in this report.

When completing a blank Other Emission Unit Data Report, the **UNITS** field varies widely and there is no consistent value for each emission unit. When providing units, make them portray the emission unit. Some suggestions are:

Tons processed Tons of solvent used Gallons used
Number of valves in operation Number of pumps in operation

In completing this form, the following information must be provided (or verified) for each emission unit:

- Emission unit description
- Percent throughputs
- Typical operating data:

    - hours/day
    - days/week
    - weeks/year
    - rate/hour
- Peak ozone season operating data (if applicable):
    - hours/day
    - days/week
    - weeks/season
    - rate/hour
- Pollutant emission rates
- Peak ozone season VOM and/or NOx emission rates (if applicable)
- Emission factors (if applicable)
- Emission estimate methods
- Verification of capturing controls and capturing stacks
- Capture efficiencies

Optional information on this form includes:

- Began operation dates
- Ceased operation dates
- Typical operating data:
    - hours/year
- Peak ozone season data:
    - hours/season
    - start time
    - end time

Section 9 – Control Device Data Form

GENERAL INFORMATION

A control device is a piece of equipment that is used to reduce or prevent the emission of one or more pollutants from a contaminated exhaust stream. These types of control devices include equipment such as filters, scrubbers, afterburners, etc. In addition, emissions from an emission unit can be reduced by using a control method. An example of a control method would be the spraying of water on a dirt road to reduce emissions of particulate matter.

All control devices used at your source to control the emissions of permitted emission units must be included in the Annual Emission Report. Use blank CONTROL DEVICE DATA REPORT forms to include devices not currently shown. Use a character such as A, or B, to identify the added control devices. The IEPA will assign a proper number when the data is entered into the DAPC database. Each control device or control method has an associated control device code.

In completing this form, the following information **MUST** be provided (or verified) for each control device:

- Control description
- Removal efficiency
- Verification of capturing controls and stacks.
- Capture efficiencies

Optional information on this report includes:

- Control codes
- Method code

- Began operation date
- Ceased operation date

☼ While control devices reduce emissions to the atmosphere, their operation can also create emissions (i.e., flare, afterburner, etc.). If your permit limits emissions from a control device, there will also be a corresponding emission unit form.

CONTROL NUMBER

The Control Number is a unique identification number assigned to a control device by the DAPC. Control Numbers are assigned sequentially, from 0001 up to a maximum of 9999 and are **not** to be changed on the form. To add control devices to the report, use blank CONTROL DEVICE DATA REPORT forms. Use control device identifiers such as "A" or "B." DAPC will assign proper numbers when the data is entered into the database.

☼ Our computer system assigns this value automatically so we have no control over its creation.

CONTROL DESCRIPTION

A description follows each control number. Each control number must have an accompanying control description. Space is provided to correct the control description, however, please do not change the description to a different type of control device. For example, do not change a baghouse to a cyclone. Changes to the control description should only be made to better describe the control device, e.g., "MIKROPUL BAGHOUSE #18314," instead of "BAGHOUSE."

☼ When adding control devices to our database, we almost always default to the descriptions and groupings of emission units as describe in your permit. This way we can make sure you are reporting the required emission units. If there are identifiers you use at your individual source, please feel free to add them to the report and we will make the changes.

PERMIT NUMBER

This is the operating permit number that includes the control device. Please do **not** make changes to this field. If it is suspected that a control device has been included in the wrong permit or is otherwise not properly permitted, contact the Permit Section.

CONTROL CODE

The control code is a 3-digit number used to describe the control device or method. A list of these codes is available separately on the web site.

REMOVAL EFFICIENCY

The capacity of a control device to reduce or remove a given pollutant, expressed as a percentage, at average operation of the emission unit. Pollutant codes are listed alphabetically with preprinted IEPA removal efficiencies. Space is provided on the form for you to correct, revise, or update the efficiencies for each pollutant. If the actual control efficiency is unavailable, the design efficiency or control efficiency limit imposed by a

permit should be used. Valid codes for this field range from 0.000 to 99.999.

METHOD

A code representing the method in which the removal efficiency was determined. Valid codes include:

- 1 - Test based upon EPA reference method
- 2 - Test based upon other test method
- 3 - Manufacturer's design value
- 4 - Engineering estimate
- 5 - Calculated based upon material balance
- 6 - Estimated based upon published value
- 7 - Other

CAPTURING CONTROLS

This is a list of each control device that captures emissions directly from the control device. Each control device is identified by a unique, four-digit number. Control numbers are assigned sequentially, from 0001 up to a maximum of 9999. Capturing control numbers may be changed.

CAPTURING STACKS

This is a list of each stack that captures emissions directly from the control device. The DAPC database assigns a unique, four-digit number to each point at which emissions reach the atmosphere. **This may be a physical stack or simply a release point**. Stack numbers are assigned sequentially, from 0001 up to a maximum of 9999. Capturing stack numbers may be changed.

CAPTURE EFFICIENCY

The percentage of emissions from the control device captured by the next control device or stack in series. Space has been provided on the form to correct capture efficiencies. The sum of all capture efficiencies of a control device may not add up to more than 100%.

Section 10 – Stack Data Form

GENERAL INFORMATION

A stack is a point at which emissions reach the atmosphere. This can be a location that has physical characteristics such as a diameter and height, or it can be a release point where the only physical characteristic is release height. This form provides data fields related to exhaust point parameters such as location, height, diameter, exhaust rate, and temperature, Each data field is explained below. Space is provided to update or correct the data in each field.

In completing this form, the following information **MUST** be provided or verified:

- Height
- Diameter (if applicable)
- Temperature
- Flow rate (if applicable)

Optional information includes those data fields related to:

- Stack description

STACK NUMBER
Each exhaust point at a source is identified by a unique, four-digit stack number assigned by the DAPC. Stack Numbers are assigned sequentially, from 0001 up to a maximum of 9999. Stack Numbers are **not** to be changed on the form. To add stacks to the report, use blank STACK DATA REPORT forms. Use stack identifiers such as "A" or "B". DAPC will assign proper numbers when the data is entered into the database.

☼ Our computer system assigns this value automatically so we have no control over its creation.

STACK DESCRIPTION
A description of the exhaust/release point.

DIAMETER
The inside diameter of a physical stack in units of feet. The diameter of a square stack can be calculated by taking 1.128 times the square root of the area of the stack.

HEIGHT
The exit height (above grade) of a stack in units of feet. Values for the height data field may only be between 1 and 1,250 feet. In those instances where a definable, physical stack does not exist for the exhaust point, enter the height (in feet) at which pollutants are released into the atmosphere. These height values should be between 1 and 200 feet.

TEMPERATURE
The temperature (in degrees Fahrenheit) of the exhaust stream at the exit of a physical stack under normal operating conditions.

FLOW RATE
The total volume of exhaust gas released from a physical stack at the operating temperature in units of actual cubic feet per minute (acfm)

Section 11 – Coating and Solvent Use Data Form
GENERAL INFORMATION
This report contains data fields that, when completed, provide the necessary information for estimating the emission of volatile organic materials resulting from the evaporation of organic solvents used in surface coating operations. One method of estimating VOM emissions is to calculate coating usage over the reporting year and multiply that usage by the VOM content of each coating. Summing the estimated VOM emissions from all coatings used during the year will provide an estimate of total VOM emissions from your source. The data fields provided on this form are described below.

COATING DESIGNATION
This field contains the manufacturer's name or designation of the coating material. Space

is provided in this column for you to add coatings that might not be included in the DAPC listing. You also may delete (cross out) any listed coatings that were not used during the reporting year. In this case, make sure that zero's are entered in the **USAGE** field.

POINT
The emission unit number where the particular coating or solvent was used. If you add coatings or solvents to this report, make sure to include the appropriate point number. If a point number has not yet been assigned by the DAPC, enter the letter designation you have assigned to that point.

COATING DENSITY
The density, in units of pounds per gallon, of the coating or solvent. This information can be obtained from manufacturer's specifications or data sheets.

VOM CONTENT
The amount of volatile organic material in units of pounds VOM per gallon of the coating material before application to the coated object. This data can be obtained from manufacturer's specifications or data sheets.

VOM CONTENT AS APPLIED
The amount of volatile organic material in units of pounds of VOM per gallon of the coating material when applied to the object being coated. This figure may or may not be identical with that in the **VOM CONTENT** field, depending upon whether other solvents or mixtures are introduced during the actual application of the coating.

USAGE
The total usage in gallons of the identified coating or solvent for the reporting year.

Section 12 – Startup/Shutdown/Malfunction Data Form

GENERAL INFORMATION
This form provides space for you to report any VOM and/or NOx emissions resulting from a startup, shutdown, or malfunction. Any data existing in IEPA files or database regarding such occurrences will be provided for your verification or correction.

EMISSION UNIT (POINT) NUMBER
The four-digit number assigned by DAPC that identifies the emission unit affected by the startup, shutdown, or malfunction. The emission unit numbers are **not** to be changed.

MODE

The two-digit number assigned by DAPC that identifies the emission unit mode of operation affected by the startup, shutdown, or malfunction. Mode numbers are **not** to be changed.

START DATE & END DATE

The starting and ending dates of the startup, shutdown, or malfunction. The format of the date is mm/dd/yy. For example, April 29, 1993 would be 04/29/93.

START TIME & END TIME

The starting and ending times of the startup, shutdown, or malfunction. For example, 3:00 p.m. is represented by 1500 and 2:00 a.m. is represented by 0200.

Abbreviations Used in this Document

acfm	Actual cubic feet per minute (ft3/min)
Agency	Illinois Environmental Protection Agency
AP-42	Compilation of Air Pollution Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through E), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27717
btu or BTU	British thermal units
BTU/ft3	British thermal unit per cubic foot
BTU/lb	British thermal unit per pound
BTU x 106	Million British Thermal Units
CAAA	1990 Clean Air Act Amendments
CAAPP	Clean Air Act Permit Program
DAPC	Division of Air Pollution Control, Illinois Environmental Protection Agency
FEIN	Federal Employers Identification Number
FIPS	Federal Information Processing Standards
gr	Grain
HAP	Hazardous Air Pollutant
ID Number	IEPA Bureau of Air Source Identification Number
IEPA	Illinois Environmental Protection Agency
K	Thousand
lb	Pound
m	Meter
MACT	Maximum Achievable Control Technology
MW	Megawatt (1 million Watts)
NESHAP	National Emission Standard for Hazardous Air Pollutants
psia	Pounds per square inch absolute
SCC	Source Classification Code
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

Terms Used in this Document

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.

ANNUAL PROCESS RATE: The actual or estimated annual fuel, process or waste operating rate.

BRITISH THERMAL UNIT: The quantity of heat required to raise one pound of water from 60^{o}F to 61^{o}F.

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 CODE: A three-digit code that defines the category of equipment used to

reduce, by destruction or removal, the amount of air pollutant(s) in an air stream before discharge to the ambient air. Please see Appendix D for a list of control devices and related, acceptable codes.

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).

CONTROL EFFICIENCY: The amount, expressed as a percentage, by which emissions of a pollutant are reduced by the control device or devices.

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

EMISSION DETERMINATION METHOD: The method generally accepted and used by those persons engaged in the field of air pollution control to derive actual emissions, whether measured or estimated. Acceptable methods include actual source tests or measurements, material balance calculations, engineering estimates, and the use of emission factors.

EMISSION FACTOR: An estimate of the quantity of pollutant released to the atmosphere because of some activity, based upon the relationship of pollution produced and the amount of raw material processed. For example, an emission factor for a blast furnace making iron would be the number of pounds of particulate matter emitted per ton of iron produced. If emission factors are used in the calculation of emissions, the source must use emission factors that are approved by the USEPA or IEPA. The preferred emission factors are contained in the USEPA publication, *Compilation of Air Pollution Emission Factors, Volume 1: Stationary Point and Area Sources, No. AP-42* (and Supplements A through E). In order to calculate emissions from emission factors, the appropriate emission factor is multiplied by the activity data, i.e., process rate, throughput, etc. Control device efficiency then provides the basis for the estimate of emissions to the atmosphere after passage through the control device. The basic emission estimate algorithm is:
$E = R \times EF \times (1 - C/100)$

where: E = emission estimate for the emission unit R = activity level (operating rate)
EF = emission factor (such as lbs emitted/ton) C = control device efficiency (in percentage)

The accuracy of the emission estimate is equally dependent upon the relative accuracy of each individual component. A typical calculation for emissions (in lbs/hr) is shown below:

EXAMPLE: Calculation of Particulate Emissions Using Data for SCC 30300801 (Ore Charging of Blast Furnace)

Given the following data:
Operating Rate (R) = 30 tons iron/hr

Emission Factor (EF) = 110.0 lb particulates/ton iron produced Control Efficiency (C) = 95%

Emissions are then calculated using:
Particulate emissions in lb/hr = 30 X 110 X (1 - 95/100) = 165.00 lb/hr

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.

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.

MODE NUMBER: A two-digit number identifying a particular method of operation of an emission unit/point that is automatically assigned by the IEPA database. An emission unit/point that has more than one mode of operation must have a mode number for each mode.

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.

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)
chloro-1,1-difluoroethane (HCFC-142b)
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
chloro-1,1,1,2-tetrafluoroethan (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)
dichlorofdifluoromethane (CFC-12) difluormethane (HFC-32)
ethane
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.

OPERATING RATE: Quantity, per unit time, of any raw material immediately consumed or product generated through the use of any equipment, operation or process. For industrial processes, this term generally refers back to the process weight (in pounds, tons, gallons, barrels, etc., per hour). For fuel combustion units, this term generally refers to fuel consumption rate (in tons, gallons or cubic feet per hour).

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

POINT: Any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant. See: EMISSION UNIT

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

PROCESS EMISSION UNIT: Any stationary emission unit/point other than a fuel combustion emission unit or an incinerator

PROCESS WEIGHT RATE: The actual weight or engineering approximation of all materials (except liquid and gaseous fuels and combustion air) introduced into any process per hour. For cyclical or batch operations, the process weight rate is determined by dividing

the actual weight or engineering approximation by the number of hours of operation, excluding any time the equipment was idle. For continuous processes, the process weight rate is determined by dividing the actual weight or engineering approximation by the number of hours in one complete operation, excluding any time the equipment was idle.

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.

SCC: Source Classification Code. An eight-digit code that provides a detailed analysis of a process creating emissions. Source Classification Codes are listed in the USEPA document, *FIRE Version 6.0 Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants*.

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.

STACK (EXHAUST POINT): A flue or conduit, free standing or with exhaust port, above the roof of the building on which it is mounted, by which air contaminants are emitted into the atmosphere. In the IEPA system, stack **may also refer to a release point which is not a physical stack.**

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.

TYPICAL OPERATION: The most common values associated with an emission unit during its operation.

TYPICAL OZONE SEASON DAY: Any day, Monday through Friday, representative of source operations during the peak ozone season.

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. Common VOCs include: benzene, butyl acetate, butyl alcohol, carbon tetrachloride, ethyl

acetate, ethyl alcohol, heptane, hexane, isobutyl alcohol, isopropyl alcohol, methyl alcohol, methylisobutyl ketone, toluene, naphtha, and xylene.