EMISSIONS INVENTORY QUESTIONNAIRE (EIQ)

INSTRUCTIONS

2002

Missouri Department of Natural Resources
Air and Land Protection Division
Air Pollution Control Program

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OVERVIEW OF EIQ FORMS

The EIQ (Emissions Inventory Questionnaire) consists of required forms and supplemental worksheets. Worksheets are process specific and required only if a facility has the applicable process. As one of the first steps to completing the EIQ, be sure to review this overview section to determine which forms are applicable to your emissions report.

There are four (4) local air pollution control agencies in Missouri that have jurisdiction over sources in their areas. The four are City of St. Louis, St. Louis County, Kansas City (which includes parts of Clay, Jackson, and Platte counties) and City of Springfield (part of Greene County). If your facility is located in one of the local air agency jurisdictions, please contact the appropriate agency for EIQ forms and EIQ related questions. Your local agency may have different regulations and reporting requirements.

The **criteria pollutant** reporting level for each **point** is 200 pounds (0.1 tons) of total emissions. For example, if there are 50 pounds of PM_{10}, 50 pounds of SO_x, and 100 pounds of NO_x, a total emission of 200 pounds, then the emission point is reportable. Not all **Hazardous Air Pollutants** (HAP) have the same reporting level as the criteria pollutants. See Form 2.T instructions for a list of the HAP reporting levels. If the point is not reportable, i.e., the emissions are below the respective reporting level, a Form 2.0 is not needed for that particular point; however, the point must be indicated on the process flow diagram (Form 1.1).

Similar processes could be grouped when certain conditions are met and reported as one emission point. However, not grouping similar processes to avoid reporting an emission point is not allowed. Further discussion on Criteria Pollutants, Reporting Levels, and Grouping can be found in the Glossary.

Total Suspended Particulate (TSP) emissions are not to be reported, as TSP is no longer a criteria pollutant.

Many facilities received preprinted EIQ forms. Air Pollution Control personnel may have made corrections that appear in the preprinted information. Corrections should not be changed without explanation.

If there are forms in your packet that do not require your submittal; please **DO NOT RETURN** the unused forms. In addition, since there have been minor changes on some forms, please do not use any forms from previous years.

The information provided in the returned EIQs will have a number of uses. The most obvious are to calculate emissions and determine fees. Other uses include meeting and/or monitoring permit requirements, providing data for modeling studies and providing an indication of air quality within the state.

Form 1.0 GENERAL PLANT INFORMATION
(Required for all facilities.)

This form includes general plant information, a plant emissions total, and a signature section certifying that the submitted information is accurate and complete.

Form 1.0P COMPANY INFORMATION - PORTABLE EQUIPMENT
(Required for all portable facilities.)

This form contains parent company mailing address information for portable equipment. This form is to be used instead of the Form 1.0 General Plant Information.

Form 1.1 PROCESS FLOW DIAGRAM
(Required for all facilities.)

This form outlines the facility's processes and emission points in a flow chart format. The process flow diagram identifies all processes, air pollution emission points, and air pollution control devices for a facility.

Form 1.2 SUMMARY OF EMISSION POINTS
(Required for all facilities.)

This form lists all emission points and associated processes identified on the Process Flow Diagram.

Form 2.0 EMISSION POINT INFORMATION
(Required for all facilities.)

This form is the **main emissions reporting form.** The actual emissions from a point are recorded on this form. A separate Form 2.0 must be completed for each emission point listed on Form 1.2. Some emission points may need more than one SCC (Source Classification Code); an example is a boiler burning two fuels. If this is the case, please indicate both SCCs on Form 1.2 and complete a Form 2.0 for each additional SCC under the same emission point.

Form 2.0C CONTROL DEVICE INFORMATION
(Required only if there are more than two control devices at an emissions point.)

This form provides control device information when there are three or more control devices operative at an emission point, or if a facility reports separate control efficiencies for different Hazardous Air Pollutants. Space limitations on Form 2.0 permit the description of only two control devices.

FORM 2.0L Landfill Information
(Required only if facility has or is a landfill.)

This form is used along with the Form 2.T to calculate the Methane, Non-Methane, and HAP emissions from an operating or closed landfill. An EIQ for a landfill is not required if it accepted no waste after November 8, 1987.

FORM 2.0P PORTABLE PLANTS
(Required only of portable facilities such as rock crushers.)

This form describes the unique characteristics of portable plants and lists all operating sites for the past year.

Form 2.0S Stack Information
(Required only if there are two or more stacks/vents at an emission point.)

This form provides stack information for points where emissions from a process enter the ambient air through two or more stacks/vents. Form 2.0 provides space for detailing information on only one stack.

FORM 2.0Z Ozone Season Information Form
(Required only of certain facilities within the St. Louis Nonattainment Area.)

The applicable area consists of St. Louis, St. Charles, Franklin and Jefferson counties and St. Louis City. A facility within this geographical area is required to submit Form 2.0Z if 10 tons or more of VOC, NO_x or CO are emitted annually.

Form 2.1 Fuel Combustion Worksheet
(Required of all facilities with on-site boilers.)

This form is used to describe the combustion equipment, fuel usage, and the calculations associated with combustion processes.

Form 2.2 Incinerator Worksheet
(Required of all facilities with an on-site incinerator.)

This form is used to describe the incinerator, list the waste material(s) incinerated, and report the annual waste material throughput. A separate Form 2.2 is required for each incinerator.

Form 2.3 VOC PROCESS MASS-BALANCE WORKSHEET
(Required only if a mass-balance calculation is used to calculate an emission factor for an emission point emitting only volatile organic compounds (VOCs).

This form provides documentation of the VOC emission factor determination. A separate Form 2.3 must be filled out for each VOC emission point for which mass-balance calculations are used to derive an emission factor.

Form 2.4 PETROLEUM LIQUID LOADING WORKSHEET
(Required only if a facility needs to calculate the emission factor for petroleum liquid loading into tank trucks, rail cars, and barges.)

This form is **NOT** to be used to calculate emission factors for loading or unloading of material in or out of storage tanks. A separate Form 2.4 must be used for each petroleum liquid loading terminal for which an emission factor is calculated.

One of the following three (3) forms is required of all facilities having one or more tanks with a storage capacity greater than 250 gallons.

Form 2.5 ORGANIC LIQUID STORAGE - FIXED ROOF TANK
Form 2.5L GENERAL LIQUID STORAGE TANK INFORMATION
Form 2.6 ORGANIC LIQUID STORAGE - FLOATING ROOF TANK

Form 2.5L is used to report breathing or working loss emissions from storage tanks if either SCC emission factors or the TANKS program factors are applied. This is the simplest tank worksheet and is applicable to both fixed and floating roof tanks.

Forms 2.5 and 2.6 will be used if, instead of applying SCC factors or the TANKS program, working and breathing loss emission factors are calculated. A separate form must be filled out for each tank and each chemical stored in the tank.

Form 2.5 is used to provide information on fixed roof storage tanks and to document calculations used to determine working and breathing losses and emission factors. Storage tanks which store the same chemical may be grouped and reported as one emission point.

Form 2.6 is used to provide information on floating roof storage tanks and to document calculations used to determine VOC losses from withdrawal, fittings, seams and the calculation of emission factors.

Form 2.7 Haul Road Fugitive Emissions Worksheet
(Required for all facilities with greater than 100 vehicle miles traveled for all haul roads.)

This form is used to provide information on haul roads and, if the SCC emission factor is not applied, to document the calculations used to generate a haul road emission factor. If Form 2.7 is

used to calculate the haul road emission factor, then the entire form must be completed for that haul road.

The instructions specific to Form 2.7 describe the information required if Form 2.7 is not used to document calculations.

Form 2.8 STORAGE PILE WORKSHEET
(Required for any facility with a raw material or finished products stored in an open storage pile located within the plant boundaries.)

This form is used to provide information on a storage pile and to document the calculations used to determine a storage pile emission factor. If Form 2.8 is used to calculate the storage pile emission factor, then the entire form must be completed for that storage pile.

Form 2.9 STACK TEST/CONTINUOUS EMISSION MONITORING WORKSHEET
(Required only if stack tests or continuous emission monitoring results are used to derive emission factors.)

This form is used to document emission factor calculations. A separate Form 2.9 must be supplied for each emission point and pollutant for which stack test or continuous emission monitoring data was used to derive an emission factor.

Form 2.T HAZARDOUS AIR POLLUTANT WORKSHEET
(Required of all facilities that emit more than the specified level of one or more of the 189 HAPs (Hazardous Air Pollutants) chemicals listed in the 1990 revisions to the Clean Air Act.)

This form is used to provide information on the HAP chemicals emitted throughout a facility. This form is used to separate out and list the individual HAPs that have already been reported as VOC/PM_{10} emissions. This form may also be used to calculate **point level** HAP emission factors.

One of the following Form 3.0s is required for all facilities.

Form 3.0 EMISSION FEE CALCULATION
(Required for all facilities unless using one of the alternative forms.)

This form lists and totals the air pollutant emissions determined on each Form 2.0. This form is also used to determine the amount your facility will pay in emission fees to the Missouri Air Pollution Control Program.

Form 3.0 CK EMISSION CALCULATION
(Required for all charcoal kilns facilities.)

Form 3.0 KC EMISSION FEE CALCULATION (KC) and
Form 3.0 STLC EMISSION FEE CALCULATION (STLC)
(Required for all facilities located within the jurisdiction of the Kansas City Health Department or the St. Louis County Department of Health, respectively.)

These forms are the same as the Form 3.0 previously described but they also deduct any air emissions fee for the calendar year of record paid to either the Kansas City Health Department or the St. Louis County Department of Health. Please contact your local agency if the emissions fee paid to the local agency was based on CO (carbon monoxide) emissions.

Form 4.0 FINANCIAL COST ESTIMATE
(Required for all facilities.)

This form is used to track any additional costs incurred by your facility within the last year to implement the Missouri Air Law or the federal Clean Air Act, as amended.

DRY CLEANER REGISTRATION FORM
(Required if facility has a Dry Cleaner on Site.)

In most cases, this form will be used instead of the general EIQ for dry cleaners.

GLOSSARY

^: This symbol is used in mathematical equations. It means to raise the preceding quantity to the indicated power.

Example 1: 36^.5 means that 36 is to be raised to the .5 (or ½) power; i.e., find the square root of 36.

Example 2: 125^(1/3) = 5 since 5x5x5 = 125.

AIRS ID - Pt:

This is a three-character emission point identifier assigned by the Air Pollution Control Program (APCP) staff. It is the Point Number in the Environmental Protection Agency's Aerometric Information Retrieval System (AIRS) - Facility Subsystem database. Once assigned this number it should remain constant from year to year, even if the Point ID supplied by the facility changes.

AIRS ID - St:

This is a three-digit stack identifier supplied by APCP staff. It is used as the Stack Number in the Environmental Protection Agency's Aerometric Information Retrieval System (AIRS) - Facility Subsystem database. Once this number is assigned to a stack this number should remain constant from year to year, even if the Stack No. supplied by the facility changes.

Allowable Emission Rate:

The emission rate calculated using the maximum rated capacity of the installation (unless the source is subject to enforceable permit conditions which limit the operating rate or hours of operation, or both) and the most stringent of the following:

1) emission limit established in any applicable emission control rule including those with a future compliance date,
2) the emission rate specified as a permit condition.

For example: An installation has an emission unit which has process inputs of 40 tons per hour along with potential PM10 emissions of 50 pounds per hour. State Regulation 10 CSR 10-3.050, "Restriction of Emission of Particulate Matter From Industrial Processes," restricts the level of potential emission rate from a process with inputs of 40 tons per hour to a maximum of 42.5 pounds per hour. The 42.5 pound per hour value is said to be the allowable emission rate for this emission unit.

The installation, at a minimum, would have to restrict the potential emissions from the emission unit to a potential emission rate of 42.5 pounds per hour. The limitation on the potential emissions would have resulted from applying a "Federally Enforceable Condition" on the Emission Unit.

Basic State Installation:

A facility which emits greater than de minimis levels of any criteria pollutant or is subject to any limitation, standard, or other requirement (regardless of emission rate) under section 111 or 112 (with the exception of 112(r)) of the Clean Air Act but does not meet the criteria for **Part 70 installations**.

Breathing Loss (also called *standing loss*):

Breathing loss occurs daily when a liquid is stored in a tank. Breathing loss for a product such as gasoline is due to evaporation and barometric temperature changes. The frequency with which gasoline is withdrawn from the tank, allowing fresh air to enter and enhance evaporation, also has a major effect on the quantity of emissions.

CAS #: Chemical Abstract Service Registry Number

CFR: Code of Federal Regulations

Classification:

This describes the system used by the Air Pollution Control Program (APCP) for enforcement purposes to recognize broad differences between pollution generating sources within the state. All classifications are determined by potential emissions, the amount of emissions that would be generated if a facility operated at 100% of its rated capacity 24 hours a day for 365 days a year (8760 hours). Removal of control is used to further differentiate between source classification. Uncontrolled emissions result when no air pollution control measures are in effect at an emission point. The following table outlines the definitions of the various source classifications for either criteria or hazardous air pollutants (HAPs) emissions.

Class	Emissions in tons/year
A1	Potential >= 100 for any pollutant
A2	Uncontrolled Potential >= 100 for any pollutant
A3	Potential >= 10 for any HAP or Potential >= 25 for any combination of HAPs
B	Uncontrolled Potential >= de minimis level for any pollutant
D	Uncontrolled Potential < de minimis levels for all pollutants.

CO: Carbon Monoxide

Control Device:

Equipment or process used to remove or prevent air contaminants from being emitted from an air pollution generating process.

County #:

The Four Digit County Number is being replaced with the THREE Digit FIPS County Number. Each county within the state has been assigned a unique number by the federal government. The lowest and highest, 001 and 229, are assigned to Adair and Wright counties, respectively. Every facility in New Madrid county, for example, will be assigned a county number of 143. Portable sources are given a county number of 777.

Criteria Pollutants:

The pollutants regulated by the Clean Air Act under Section 108 are:

PM10 - Particulate Matter less than 10 microns in diameter
NOx - Nitrogen Oxide Compounds
SOx - Sulphur Oxide Compounds

VOC - Volatile Organic Compounds
Lead - Lead (Pb)
CO - Carbon Monoxide

CSR: Code of State Regulations

Degrees R:

Degrees Rankine = F (Fahrenheit) degrees + 460 degrees F. The volume of a gas will theoretically vanish at absolute zero or -460 degrees Fahrenheit. Absolute temperatures determined by using Fahrenheit units are expressed as degrees Rankine.
Example: 10 degrees F = (10 + 460) degrees Rankine = 470 degrees R.

De minimis Levels:

The level of emissions from an installation at which APCP considers the installation significant. These facility-wide tons per year levels are:

CO	-	100	Lead	-	0.6
PM10	-	15	HAPs (Individual)	-	10
SOx	-	40	HAPs (Combined)	-	25
NOx	-	40			
VOC	-	40			

Example: Suppose annual PM10 emissions from Facility X are 20 tons but total emissions of all other criteria pollutants are below de minimis levels. Because the PM10 de minimis level is exceeded, Facility X must report the PM10 emissions and the total emissions of each criteria and HAP pollutant.

Emission Factor:

An average value that relates the quantity of a pollutant released to the atmosphere with the amount of activity associated with the process releasing that pollutant. Such factors can be used to estimate the emissions from various sources generating air pollution. An emission factor for natural gas combustion is 3.0 lbs of PM10 per Million Cubic Feet (MMCF) of gas burned. An emission factor for a haul road can be 2.7 lbs. of PM10 per Vehicle Miles Traveled (VMT).

EIQ: Emissions Inventory Questionnaire

Emission Point:

Any specific point or installation where an air pollutant is released from a process or operation into the ambient air.

Example: Suppose the first emission point at a facility is a 30 foot stack which emits pollutants from a boiler, the stack could be labeled EP1. The boiler would be the process producing air pollutants, so an appropriate Source Classification Code (SCC) would be chosen to reflect that the boiler is one process under this emission point.

Emission Release Point

An Emission Release Point is the point at which pollutants are released into the ambient air. This emission may be fugitive or it may be vented through a device such as a stack.

Emission Unit:

Any part or activity of an installation that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act (10 CSR 10-6.020). For the purposes of the operating permit application, an emission unit is a sub-point of an emission point from the Emissions Inventory Questionnaire.

For example, an EIQ for Facility B lists Emission Point 1 as a stack which emits pollutants from two boilers and a kiln. The three emission units are boiler 1, boiler 2, and the kiln.

Facility:

For the purposes of EIQ and operating permit application only, facility and installation are interchangeable terms. (see **Installation** for further information).

Federally-Enforceable Conditions:

All limitations and conditions which are enforceable by the administrator for Region VII of the United States Environmental Protection Agency, including those requirements developed pursuant to 10 CSR 10-6.070 or 6.080, requirements within any applicable state implementation plan, any construction permit requirements established pursuant to 10 CSR 10-6.060, including operating permits issued under an EPA-approved program that is incorporated into the state implementation plan and expressly requires adherence to any permit issued under the program (10 CSR 10-6.065). Voluntary conditions proposed in the operating permit application will become federally-enforceable when the operating permit is finally issued.

FIPS County #: See County #.

Grouping Emission Units:

Under certain conditions processes may be grouped together and reported under one emission point. The processes must be the same (or quite similar) and, if control devices are operative on emissions from any process, all processes must be controlled. In addition, any control devices must remove specific pollutants with the same efficiencies at all processes. Typically the emissions generated by each process are "small" or the processes are so similar that reporting them as distinct points adds little or nothing to the EIQ. Examples of common groupings are space heaters, all of which burn the same fuel; limestone chat haul roads carrying similar types of vehicular traffic; and multiple dump pits at a grain elevator.

Hazardous Air Pollutant (HAP):

Any of the air pollutants listed in 10 CSR 10-6.020(3)(C). A copy of this list is provided in the appendix.

Intermediate State Installation:

A facility that would meet the emissions criteria for a **Part 70 installation**, except for the imposition of voluntarily agreed to **Federally-Enforceable Conditions** proposed in the operating permit application, that reduce its potential emissions below Part 70 levels.

Installation:

All emission point\unit operations that belong to the same industrial grouping (the same first two(2)-digits of the SIC code) that are located on one (1) or more contiguous or adjacent properties and are under the control of the same person (or persons under common control). This definition includes any activities that result in fugitive emissions, and any marine vessels emissions while docked at the installation. (As defined in 10 CSR 10 6.020)

MCF: Thousand Cubic Feet

MMCF: Million Cubic Feet

MCF and MMCF are commonly used measures of natural gas consumption. The SCC (Source Classification Code) emission factors for natural gas are expressed in MMCF of gas burned, but some gas utilities' bills are expressed in terms of MCF. For emissions to be correctly calculated, the MCF term must first be converted to MMCF by dividing the MCF quantity by 1000.

Example: 16,972 MCF = 16,972 ÷ 1,000 MMCF = 16.972 MMCF.

Maximum Hourly Design Rate (MHDR):

Maximum Hourly Design Rate is the maximum throughput that could be processed in one hour of continuous operation by the equipment at this emission point. The throughput and MHDR must be expressed in the same Source Classification Code (SCC) units. If specific equipment information on the MHDR is not available, contact the Air Pollution Control Program for alternative methods to estimate the MHDR.

Example: Suppose the maximum capacity of a dump pit at a country elevator is 5,000 bushels an hour and wheat is the typical grain processed. Because the SCC units for grain receiving are in tons, the MHDR must be stated in terms of tons, not bushels.
5,000 bushels x 60 lbs/bushel ÷ 2,000 lbs/ton = 150 tons MHDR.

Molecular Weight:

The sum of the atomic weight of the constituent elements.

Example: The molecular weight of methane (CH_4) is 12+4(1) = 16 grams. This follows from the periodic table observation that the atomic weights of carbon and hydrogen are 12 and 1 grams, respectively.

NOx: Nitrogen Oxide Compounds, a criteria air pollutant.

Part 70 Installation:

A facility that meets either a source category or the emission criteria in 10 CSR 10-6.065(D). Part 70 installations are subject to all the Part 70 operating permit requirements found in Section (6) of 10 CSR 10-6.065. See Instructions under Section A for information on how to determine whether your facility is a Part 70 installation.

Plant #:

This is the second of a pair of four digit identification numbers assigned to all facilities in the APCP database. Each facility within a county has been assigned this unique identification number by the APCP. The lowest plant number will always be 0001 but the highest will be dependent upon the number of facilities in the county.

Particulate Matter less than ten microns (PM10):

Particulate Matter less than 10 microns in diameter, a criteria air pollutant. Examples are dust or smoke. If an emission factor is not listed for PM10, usually an emission factor can be calculated as ½ of the Total Suspended Particulate (TSP) emission factor.

Potential Emissions:

The emission rates of any pollutant at maximum design capacity. Annual potential shall be based on the maximum annual-rated capacity of the installation assuming continuous year-round operation. Federally enforceable permit conditions on the type of material combusted or processed, operating rates, hours of operation or the application of air pollution control equipment shall be used in determining the annual potential. Secondary emissions (emissions which occur or would occur as a result of the construction or operation of the installation or major modification but do not come from the installation or modification itself, do not count in determining annual potential.

Potential Emissions - Uncontrolled:

The amount of pollutants that could be emitted by a facility if all equipment is operated at the maximum hourly design rate for 24 hours per day, 7 days a week, 52 weeks per year (8,760 hours) removing the effect of any pollution control devices, such as a baghouse, being taken into account.

Potential Modifier:

This modifier reflects the reduction in the potential emissions resulting from an installation either being subject to an Federal\State Applicable Requirement\Regulation or by having established a "Federally Enforceable" permit condition to limit the potential emissions. The potential modifier is the percentage change due to the application of all of the appropriate potential limiting restrictions for a particular Emission Unit(s).

The modifier is expressed in terms of the decimal percentage of the remaining potential emissions. The modifier's value will always be greater than zero (0) and will never exceed a maximum of one (1). The Potential Modifier will equal one (1) if there are no potential limiting restrictions for the Emission Unit(s).

For example, an installation proposes a "Federally Enforceable Permit Condition" to limit the number of hours of operation from the normal 8760 hours to no more than 6,570 hours per year. This proposed condition would result in a **25%** (i.e. [1 - (6570 / 8760)] reduction in the potential emissions from every Emission Unit(s) in the installation. The value of the potential modifier would be entered as **0.75** for the purposes of calculating the new potential emissions from all the Emission Unit(s).

PSIA: Pounds per square inch

Release Flow Path

The Release Flow Path describes the route the emission takes from the emission unit to the emission release point. This path would include any control equipment that reduces the emission levels along the way. In MoEIS, release flow path is the mechanism used to document how emission units (such as boiler), control equipment (such as baghouse), and emission release points (such as stack) are connected.

Responsible Official:

Includes one (1) of the following:

A. The president, secretary, treasurer or vice-president of a corporation in charge of a principal business function, or any other person who performs similar policy and decision-making functions for the corporation, or a duly authorized representative of this person if the representative is responsible for the overall operation of one (1) or more manufacturing, production, or operating facilities applying for, or subject to, a permit and either:

(I) The facilities employ more than two hundred and fifty (250) persons or have a gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars); or

(II) The delegation of authority to his representative is approved in advance by the permitting authority.

B. A general partner in a partnership or the proprietor in a sole proprietorship.

C. Either a principal executive officer or a ranking elected official in a municipality, state, federal, or other public agency. For the purpose of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the operations of a principal geographic unit of the agency; or

D. The designated representative of an affected source insofar as actions, standards, requirements or prohibitions under Title IV of the Clean Air Act or the regulations promulgated under the Act are concerned and the designated representative for any purposes under Part 70. (10 CSR 10-6.020)

Reporting Level (Reporting Threshold):

If, after grouping similar processes in an installation, 200 lbs (0.1 ton) or more of criteria pollutants are emitted from a **point**, then all criteria pollutant emissions from that point must be reported. (HAP reporting levels are listed in the Form 2.T instructions).

Example 1: Suppose processes X, Y and Z are similar and have PM10 emissions of 100 lbs, 125 lbs, and 150 lbs, respectively. Since the processes are similar, the PM10 emissions must be totaled in order to determine whether or not these emissions must be reported. This total is 100 + 125 + 150 = 375 lbs and exceeds the 200 lbs (0.1ton) reporting threshold. Accordingly, processes X, Y, and Z will be reported under one point, say EP5, on Form 2.0. If there are other emission factors (such as VOC) listed with the SCC assigned to EP5, then emissions of these pollutants must also be reported, even though they do not exceed the 200 lb reporting threshold. The throughput listed on Form 2.0 would be the sum of the

throughputs for processes X, Y and Z.

Example 2: Suppose a process emits 100 lbs of VOC, 150 lbs of SO_x and 125 lbs of PM_{10}. Since the total of these emissions exceeds 200 lbs, these emissions must be reported.

Rounding Numbers:

This term involves approximating numerals. The reason for the approximation is to make the representation less complicated.

Example: Round 4.527 to two decimal places, i.e., approximate this number to the nearest hundreds. (Allow only two digits to the right of the decimal.) Since 7 is greater than or equal to 5, in rounding we "drop" the 7 and add 1 to the 2 (the hundreds position). Thus, 4.527 rounded = 4.53.

Example: Round 3.524 to the nearest hundreds. "Drop" the 4 since 4 is less than 5; do not add 1 to the 2; therefore, 3.524 rounded = 3.52

Rounding is different than truncation. In truncation, digits are "dropped" with no effect on digits to the left.

Example: Truncate to two decimal positions.
4.527 truncated = 4.52; 3.514 truncated = 3.51.

On previous EIQs, many did not round to the nearest hundreds but truncated instead. Please be sure to round, not truncate, the answers.

RVP 7: Diesel gasoline

RVP 10: Normal gasoline

RVP 13: Ethanol blended gasoline

Seg. No.: This is a two-digit number assigned by APCP used to uniquely identify processes associated with an emission point. Generally, if emission point EP01 has three processes associated with it, then Seg. No.s 01, 02 and 03 will be assigned to those processes. It is used as the Segment Number in the Environmental Protection Agency's Aerometric Information Retrieval System - Facility Subsystem database. Once assigned, this number should remain constant from year to year, even if the SCC used by the facility to identify a process changes.

SIC: Standard Industrial Classification. This is a designation system used by the federal government to identify industrial processes.

SCC: Source Classification Code. This is an eight digit number associated with a unique process from which air pollutants are emitted.

Example: A solvent-based paint applied in a paint booth could have an SCC of 4-02-001-01 or 4-02-001-02. Which of the two is appropriate would depend on the throughput units chosen. The throughput units for 4-02-001-01 are in tons of coating mix applied. Throughput units for 4-02-001-02 are in gallons of coating mix applied.

SCC Units: The measure by which annual throughput is denoted; examples are tons, gallons, million cubic feet, vehicle miles traveled, etc.

SOx: Sulfur Oxide Compounds, a criteria air pollutant.

Total Potential Emissions:

The emissions resulting if the facility operated at maximum capacity twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year.

In the operating permit application, your facility's **total potential emissions** are the annual **potential emissions** that would be possible when the facility is in compliance with **federally-enforceable conditions** that are currently in place. The voluntary conditions proposed in the operating permit should be included in the calculation of **total potential emissions**.

Toxic Air Pollutant:

For the purposes of the operating permit application, toxic and **hazardous air pollutant (HAP)** are interchangeable terms.

True Vapor Pressure:

The equilibrium partial pressure exerted by a volatile organic liquid, as defined by ASTM-D 2879 or as obtained from standard reference texts.

TSP: Total Suspended Particulate. This is no longer reportable as a criteria pollutant.

Vapor Pressure:

When liquids evaporate, gas vapor forms at the surface of the liquid and escapes. In a closed container, the vapor accumulates and creates pressure called vapor pressure. Each liquid exerts its own vapor pressure at a given temperature. As temperature increases, more vapor forms and vapor pressure increases.

VMT: Vehicle Miles Traveled

VOC: volatile organic compounds, a criteria air pollutant

Working Loss:

Evaporative loss occurring as a result of the filling and the withdrawal of liquid to and from a storage tank. Also called *withdrawal loss.*

INSTRUCTIONS

FORM 1.0 GENERAL PLANT INFORMATION

This is a **REQUIRED** form for all facilities.

Facility Name: Enter the official company name and/or plant designation for the facility that is submitting this Emissions Inventory Questionnaire (EIQ) if not already preprinted. This name will usually be the same as on the mailing label. If your official company name has changed in the calendar year of record, please enter the new name in the box. This official facility name must be entered on every form submitted.

Facility Street Address, City and ZIP Code: The street address is the physical location of the facility.

Facility Mailing Address, City and ZIP Code: The mailing address should be entered if the mailing address of the facility is different from the street address.

Facility Contact Person: The facility contact is the person most familiar with the operations of the plant and who should answer any questions regarding information about the facility. Also, list the title of the contact person.

FIPS County Number, County No., Plant No., Year of Data, Region, and Classification: This information may be preprinted on the form. If any of the boxes are blank, fill in any of the known information. See "List of Missouri Counties" in this instruction packet for appropriate FIPS (3 digit), county (old 4 digit) codes and Department of Natural Resources regions. Year of Data is the calendar year of record. If you do not know your plant number or classification, leave blank. Air Pollution Control personnel will assign. The FIPS County Number, Plant Number and Year of Data must be entered on every form and any documentation submitted.

Facility Phone Number: The facility phone number is the telephone number where the contact person can be reached.

Product/Principal Activity: Enter the general product manufactured, the material handled by your facility or the principal activity performed at this location.

Number of Employees: Enter the total number of full-time and the equivalent number of part-time employees. Two part-time workers employed 20 hours per week are equivalent to one full-time worker.

Land in Acres: Enter the number of acres at the plant location and any surrounding land that the same facility also owns.

Where to send EIQ in Future: Check appropriate box.

Geographical Coordinates: The geographical coordinates field is required and must be entered in either the Universal Transverse Mercator (UTM) coordinate system or with latitude and longitude coordinates.

CSTR Legal Description: United States Public Land Survey – The system of partitioning land into parcels, also called township and range. On lands where CSTR is applicable, this information is found in the legal description (abstracts, deeds, etc.) of the land. An example of this description:

The northwest quarter of the northeast quarter of section 3 of township 8 north, range 1 west, etc. is written on Form 1.0 as follows:

CSTR Legal Description				
(1/4):	(1/4):	Section	Township	Range
NW	NE	3	8N	1W

The County/Township/Section/Range field must be completed except those facilities that report to a local agency.

Resources for obtaining coordinates:

1. Global Positioning Units
2. Utilizing local resources available to the company such as enhanced 911 systems, planning and zoning offices, county clerk's offices, etc. that are now becoming involved in assigning locator information to companies.
3. Utility Companies
4. Map Interpolation
5. Address Geocoding
6. Architectural Plans (Surveys)

Parent Company Information: Complete this block if your company is owned totally or in part by another company at a different location.

Total Plant Emissions: After the actual air emissions are totaled for each pollutant in Block 2 on Form 3.0, Emissions Fee Calculation, transfer the appropriate figures **(2 decimal places)** for each pollutant to this block.

Certification: The last two lines on the page are to be completed by the person completing the form and by an authorized company representative. Include their titles in the blocks also. **Both signature blocks must be signed**; unsigned EIQs will **NOT** be accepted.

Check Amount, Check Number, Check Date: Fill in your company's check information.

NOTE: Requests for EIQ confidentiality must be submitted annually in letter format, signed by an authorized company representative.

INSTRUCTIONS
FORM 1.1 PROCESS FLOW DIAGRAM

This is a **REQUIRED** form for all facilities. A separate sheet of paper may be used as a substitute for this process flow diagram form. If a substitute sheet is used, please do not return blank copies of Form 1.1. The following directions apply to both Form 1.1 and substitute sheets:

Complete **Facility Name, FIPS County Number, Plant Number and Year of Data.**

A process flow diagram identifies all processes at a facility. A process is a specific function or procedure occurring within the facility that transforms, transports or consumes any solid, liquid or gaseous material; this includes all operations involving manufacturing, material loading/unloading, fuel combustion and any cleanup of equipment or materials. A process flow diagram should describe the interrelationships of all the operations mentioned above. The diagram should also show all emission points and air pollution control devices.

An emission point is any specific point or area where any air pollutant is released from a process or operation into the ambient air, or the process where the emissions are generated. See the glossary definitions for a discussion of these two viewpoints.

An air pollution control device is any equipment or other method used to control, remove or reduce the amount of a specific air pollutant before that pollutant is released into the ambient air.

Please construct or provide a clear and concise drawing that describes all processes and emission points within your facility. The facility may provide any existing map(s) or diagram(s) in place of the process flow diagram if it lists and labels all the processes and emission points within the facility and clearly indicates process flow. Whichever option you choose, label the diagram as follows:

A. Identify each process with an appropriate label that is descriptive of that operation and/or the equipment used in that process.

B. Identify with an appropriate identification number all emission points from which any air pollutant is emitted from a process. If an existing identification system for the facility is not already in place, number all emission points sequentially, beginning with emission point number EP01.

C. Identify each air pollution control device with an identification number and an appropriate label descriptive of the control device(s) being used with a process. If an existing identification system for the facility is not already in place, control devices should be numbered sequentially, beginning with device CD01.

The same identification numbers that are used in the process flow diagram must be used consistently throughout the rest of the EIQ. **The same identification numbers should also be used consistently from year to year.** DO NOT RENUMBER emission points if you add or delete a process. A point may be deleted only if the process equipment has been dismantled.

INSTRUCTIONS
FORM 1.2 SUMMARY OF EMISSION POINTS

This is a **REQUIRED** form for all facilities.

All emission points shown on Form 1.1, Process Flow Diagram, must be listed on this page.

Complete **Facility Name, FIPS County Number, Plant Number and Year of Data.**

1) **Total Number of Emission Points:**

Enter the total number of emission points shown on Form 1.1, Process Flow Diagram.

2) **Point Number:**

The identification number must be the same as the identification number assigned to this point on all other EIQ forms.

3) **Point Description:**

Provide a brief description that uniquely describes this emission point. This should be the same as the point description entered on Form 2.0.

4) **Worksheet(s) Used with Form 2.0:**

At least one Form 2.0 must be completed for each emission point. Please list any other worksheets (Form 2.1 through Form 2.T) used to provide additional information or perform a calculation for this emission point. Only the worksheet number(s) should be entered in this block.