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GUIDANCE ON THE IMPLEMENTATION OF AN EMISSION STATEMENT PROGRAM

Office Of Air Quality Planning And Standards
Office Of Air And Radiation
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ABBREVIATIONS

AFP644 Report	AIRS AFS Plant Emissions Inventory Report
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
CAA	Clean Air Act
CAAA	1990 Clean Air Act Amendments
CFR	Code of Federal Regulations
CHIEF	Clearinghouse for Inventories and Emission Factors
D&B	Dun and Bradstreet
EM/CC	Enhanced Monitoring/Compliance Certification
EPA	U.S. Environmental Protection Agency
FACTS	Facility and Company Tracking System
FINDS	Facility Index System
FIPS	Federal Information Processing Standards
GPS	Global Positioning System
I/M	Inspection and Maintenance
NAAQS	National Ambient Air Quality Standards

NAPAP	National Acid Precipitation Assessment Program
NO	Nitric oxide
NO_x	Nitrogen oxides
NO_2	Nitrogen dioxide
NSPS	New Source Performance Standard
NSR	New Source Review
OAQPS	Office of Air Quality Planning and Standards
OIRM	Office of Information Resources Management
OMB	Office of Management and Budget
ppm	Parts per million
psi(a)	Pounds per square inch (actual)
QA	Quality Assurance
RACT	Reasonably Available Control Technology
RE	Rule Effectiveness
RFP	Reasonable Further Progress
SAMS	SIP Air Pollutant Inventory Management Subsystem
SCC	Source Classification Code

SIC	Standard Industrial Classification
SIP	State Implementation Plan
tpy	Tons per year
VOC	Volatile Organic Compounds

DEFINITIONS

Actual emissions: The actual rate of emissions of a pollutant from an emissions unit for the calendar year or seasonal period. Actual emission estimates must include upsets, downtime and fugitive emissions, and must follow an "emission estimation method."

AIRS code: The 9 digit source identification code used by the Aerometric Information Retrieval System (AIRS). The code is determined as follows: the first two digits are the State Federal Information Processing Standards (FIPS) code, the next three are the FIPS county code, and the last 4 digits are a unique identifier for the emissions facilities in AIRS/AFS.

Annual process rate: The actual or estimated annual fuel, process, or solid waste operating rate. The AIRS facility subsystem source classification code table prescribes the units to be used with each source classification code.

Certifying individual: The individual responsible for the completion and certification of the emission statement (i.e., officer of the company) and who will take legal responsibility for the emission statement's accuracy.

Control efficiency: The actual total control efficiency achieved by the control device(s). The actual efficiency should reflect control equipment downtime and maintenance degradation. If the actual control efficiency is unavailable, the design efficiency or the control efficiency limit imposed by a permit should be used.

Control equipment identification code: The AIRS/AFS code which defines the equipment (such as an incinerator or carbon adsorber) used to reduce, by destruction or removal, the amount of air

pollutant(s) in an air stream prior to discharge to the ambient air.

Emission factor: An estimate of the rate at which a pollutant is released to the atmosphere as the result of some activity, divided by the rate of that activity (e.g. production rate or throughput).

Estimated emissions method code: A one-position AIRS/AFS code which identifies the estimation technique used in the calculation of estimated emissions.

EPA Facility ID code: The Facility Index System (FINDS) facility identification code, also known as the EPA facility identification number. A number assigned by EPA to link source information between EPA databases.

Fugitive emission: Releases to the air that are not emitted through stacks, vents, ducts, pipes, or any other confined air stream, including fugitive equipment leaks, evaporative losses from surface impoundments, and releases from building ventilation systems.

Material balance: Technique used to estimate emissions from a source by accounting for the weights of one or more substances in all incoming and outgoing process streams.

Nontraditional sources: Those sources that have not previously reported emissions (e.g., sources emitting 25 to 100 tpy of NO_x and new VOC or NO_x sources).

Oxides of nitrogen: (or NO_x) In air pollution usage, this comprises nitric oxide (NO) and nitrogen dioxide (NO_2), expressed as molecular weight of NO_2.

Peak ozone season: That contiguous 3 month period of the year during which the highest ozone exceedance days have occured over a period covering the last 3 to 4 years. Most ozone nonattainment areas have a peak ozone season lasting from June through August. The period used for the 1990 base year ozone SIP inventory should be used for subsequent emission statements.

Percentage annual throughput: The weighted percent of yearly activity for the following periods:

1) December-February
2) March-May
3) June-August
4) September-November

The first season (December-February) will encompass 2 calendar years (e.g., Dec '92 - Feb '93).

Plant: The total facilities available for production or service. Plant level information (e.g., address, latitude/longitude, SIC code) is a required component of emission statement reporting.

Point: A physical emission point or process within a plant that results in pollutant emissions. A unique identifier (point identification number) exists for each point within each facility in the AIRS database.

Potential to emit: The capability of a source to emit a pollutant at maximum design capacity, except as constrained by federally-enforceable permit conditions which include the effect of installed air pollution control equipment, restrictions on the hours of operation, and the type or amount of material combusted, stored, or processed.

Process rate (identified as fuel process rate on the AIRS AFP644 report)**:** Quantity per unit time of any raw material or process intermediate consumed, or product generated through the use of

any equipment, source operation, or process. For a stationary internal combustion unit or any other fuel burning equipment, this term means the quantity of fuel burned per unit time.

Rule effectiveness: A measure of the ability of the regulatory program to achieve all the emissions reductions that could be achieved by full compliance with the applicable regulations at all sources at all times. It reflects the assumption that regulations typically are not 100 percent effective due to limitations of control techniques or shortcomings in the enforcement process. EPA allows the use of an 80 percent default value, but gives States the option to derive local, category-specific RE factors.

SCC: Source Classification Code. An eight-position code which provides a detailed analysis of a process creating emissions at a point. A listing of SCCs can be found in the EPA document *AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants.*

Segment: Components of an emissions point or process, at the level that emissions are calculated. One example of a segment is a boiler burning #2 oil. A unique identifier (segment identification number) exists for each segment within each point and plant in the AIRS database. Each segment is also identified by a SCC.

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 test: Direct measurement of pollutants in the exhaust stream(s) of a facility.

Stack: A (smoke) stack or vent within a plant where emissions are introduced into the atmosphere. A unique identifier exists for each stack within each facility in the AIRS database.

Stationary Source: Any building, structure, facility, or installation which emits, or may emit, any air pollutant subject to regulation under the Act.

Traditional sources: Those sources that have traditionally reported their emissions. Generally, larger sources that have previously been required to submit emission information.

Transport region: A region covering multiple States which may be established by the Administrator whenever interstate transport of pollutants contributes significantly to the violation of NAAQS.

Typical ozone season day: A day typical of that period of the year during the peak ozone season.

Volatile organic compounds (VOC): Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity: methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,1-trichloro-2,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (CFC-22); trifluoromethane (FC-23); 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC 114); chloropentafluoroethane (CFC-115); 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1-dichloro 1-fluoroethane (HCFC-141b); 1-chloro 1,1-difluoroethane (HCFC-142b); 2-chloro-1,1,1,2-tetrafluoroethane

(HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2,-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); and perfluorocarbon compounds which fall into these classes - (1) cyclic, branched, or linear, completely fluorinated alkanes, (2) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations, (3) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and (4) sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

EXECUTIVE SUMMARY

The 1990 Clean Air Act Amendments (CAAA) require increased reporting and tracking of emissions. The emission statement requirements have been developed to be consistent with several other reporting requirements. Thus, emission statement data will provide information useful for the development, quality assurance, and completeness of several emission reporting requirements, including: tracking of reasonable further progress (RFP), periodic State Implementation Plan (SIP) inventories, annual Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS) submittals, the operating permit program (Title V), emission trends, and compliance certifications. The future of emission statement reporting includes the ultimate goal of consolidating these reporting requirements into one annual effort.

This document contains technical guidance for the development and implementation of an emission statement program. It is not meant to be interpreted as requiring or mandating any of the provisions discussed. Its purpose is to provide an interpretation of the 1990 Clean Air Act Amendment requirement for emission statements by addressing which sources are subject to emission statements, what constitutes an emission statement, what should be submitted, and suggested dates for these submittals. EPA plans to revise the Code of Federal Regulations to incorporate emission statements. The process will include an opportunity for full public notice and comment on the provisions. Such a revision will allow EPA to require the submittal of appropriate emission statement data and status reports.

The basic requirements of the CAAA, Section 182(a)(3)(B) are reviewed in this document. Section 182(a)(3)(B) requires that States with areas designated as nonattainment for ozone require emission statement data from sources of volatile organic

compounds (VOC) or oxides of nitrogen (NO_x) in the nonattainment areas. This requirement applies to all ozone nonattainment areas, regardless of the classification (Marginal, Moderate, etc.). Based upon sections 184(b)(2) and 182(f) of the CAAA, the emission statement requirement also applies to stationary sources which emit, or have the potential to emit, 50 tpy or more of VOC, or 100 tpy or more of NO_x in attainment areas within ozone transport regions. A revision of the State's SIP requiring emission statements should be submitted within 2 years of the enactment of the CAAA.

The States may waive, with EPA approval, the requirement for emission statements for classes or categories of sources with less than 25 tons per year of actual plant-wide NO_x or VOC emissions in nonattainment areas if the class or category is included in the base year and periodic inventories and emissions are calculated using emission factors established by EPA (such as those found in EPA publication AP-42[1]) or other methods acceptable to EPA.

Whatever minimum reporting level is established, if either VOC or NO_x is emitted at or above this level, the other pollutant should be included in the emission statement, even if it is emitted at levels below the specified cutoffs.

The CAAA require facilities to submit the first emission statement to the State within three years after the date of the enactment of the CAAA, and annually thereafter. EPA is strongly recommending that States require a submittal date of April 15 to allow use of the emission statement data in the preparation of the annual point source data submittal to EPA under 40 CFR 51.323. The first emission statement, which is due in 1993, will be based on emissions in 1992.

The minimum emission statement data should include: certification of data accuracy, source identification information, operating schedule, emissions information (to include annual and typical ozone season day emissions), control equipment information, and process data. The individual data elements are described in detail in sections 2.2.6 and 2.2.7 of this document. The emission statement data elements were developed to be consistent with other source and State reporting requirements. This consistency is essential to assist States with quality assurance for emission estimates and to facilitate consolidation of all EPA reporting requirements.

In addition to the emission statement submittal, States should provide to EPA a status report that outlines the degree of compliance with the emission statement program. Beginning July 1, 1993, States should report quarterly to EPA the total number of sources affected by the emission statement provisions, the number that have complied with the emission statement provisions and the number that have not. This status report should also include the total annual and typical ozone season day emissions from all reporting sources, both corrected and non-corrected for rule-effectiveness (RE). States should include in their status report a list of sources that are delinquent in submitting their emission statements and that emit 500 tpy or more of VOC or 2500 tpy or more of NO_x. This report should be a quarterly submittal until all the regulated sources have complied for the reporting year. Suggested submittal dates for the quarterly status reports are July 1, October 1, January 1, and April 1.

States should maintain adequate records of emission statement data and source certifications of emissions submitted to them by sources for a period of at least three years to allow for review or verification of the information as needed.

States are responsible for reviewing the consistency of the emission statement data with other available data sources and for resolving any inconsistencies with the facility. Once an emission estimate is agreed upon, the State should enter the emission statement data into AFS by July 1 of each year, beginning in 1993. States should coordinate this activity with other reporting requirements to avoid deleting valuable data in the AIRS database.

The emission statement reporting format described in this document provides for two data collection mechanisms. States should send traditional sources, that is, those with emission data already in the AIRS database, the source's AIRS AFP644 report for review and/or correction. Nontraditional sources, those who do not have emission data on file with the EPA, should be sent an Emission Statement Initial Reporting Form. In both cases, the reporting form or report should be accompanied by an explanatory letter and detailed instructions. States have the option of developing their own emission statement reporting format. If States develop an alternative reporting mechanism, care should be taken to ensure that the minimum emission statement data elements are requested and that the emission statement data are provided to the EPA via the AIRS system.

The provisions outlined in this report are not mandated at this time. A revision of the CFR, addressing both data and status report submittals, is anticipated to occur in order to reflect the requirements of the emission statement program. EPA is anticipating pursuing the rulemaking process to require submittal of the emission statement data. This process will occur after an opportunity for full public notice and comment is provided.

1.0 INTRODUCTION

1.1 Purpose

The purpose of this document is to provide guidance to State agencies for the development of their emission statement programs. In addition, this guidance meets the requirements of section 182(a)(3)(B) of the CAAA by prescribing a form for the submission of annual emission statements.

The EPA is working to coordinate the emissions reported for several programs. Part of this effort involves maintaining consistency in the emission data reported for emission statements, the annual point source submittal, and the SIP ozone emission inventory. To achieve this goal, the VOC and NO_x emissions values obtained under the emission statement program should be used in the annual point source submittal and in the SIP ozone emission inventory.

1.2 Background

On November 15, 1990, amendments to the Clean Air Act (CAA) were enacted. Title I of the CAAA requires, among other things, that States with areas designated nonattainment of the ozone National Ambient Air Quality Standards (NAAQS) establish regulations for annual reporting of actual emissions by sources that emit VOC or NO_x in the nonattainment areas. Based upon sections 184(b)(2) and 182(f) of the CAAA, emission statements are also required from sources in attainment areas within ozone transport regions which emit, or have the potential to emit, 50 tpy or more of VOC, or 100 tpy or more of NO_x.

Emission statements are intended to assist the State agencies in their reporting and analysis of emission estimates. The emission estimates reported on emission statements will be

useful in the annual tracking of emission reductions. This tracking will help to monitor the progress that areas make towards attainment of the ozone NAAQS.

Section 182(a)(3)(B) of the CAAA, which contains the requirements for emission statements, reads as follows:

> *Emission statements. - "(i) Within 2 years after the date of the enactment of the Clean Air Act Amendments of 1990, the State shall submit a revision to the State implementation plan to require that the owner or operator of each stationary source of oxides of nitrogen or volatile organic compounds provide the State with a statement, in such form as the Administrator may prescribe (or accept an equivalent alternative developed by the State), for classes or categories of sources, showing the actual emissions of oxides of nitrogen and volatile organic compounds from that source. The first such statement shall be submitted within 3 years after the date of the enactment of the Clean Air Act Amendments of 1990. Subsequent statements shall be submitted at least every year thereafter. The statement shall contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement.*
>
> *(ii) The State may waive the application of clause (i) to any class or category of stationary sources which emit less than 25 tons per year of volatile organic compounds or oxides of nitrogen if the State, in its submissions under subparagraphs (1) or (3)(A), provides an inventory of emissions from such class or category of sources, based on the use of the emission factors established by the Administrator or other methods acceptable to the Administrator."*[2]

Section 184(b)(2) of the CAAA states that stationary sources which emit, or have the potential to emit, 50 tpy or more of VOC in ozone transport regions are considered major sources. These sources are subject to all regulations which apply to major stationary sources within moderate nonattainment areas. The emission statement requirement applies to sources in marginal and above ozone nonattainment areas and therefore also applies to

these sources of VOC in ozone transport regions. Section 184(b)(2) of the CAAA reads as follows:

> *"...For the purposes of [control of interstate ozone air pollution] any stationary source that emits or has the potential to emit at least 50 tons per year of volatile organic compounds shall be considered a major stationary source and subject to the requirements which would be applicable to major stationary sources if the area were classified as a Moderate nonattainment area."*[3]

Section 182(f) extends the requirements for major sources of VOC in ozone transport regions to major sources of NO_x. Section 182(f) reads as follows:

> *"The plan provisions required under [subpart 2] for major stationary sources of volatile organic compounds shall also apply to major stationary sources (as defined in section 302...) of oxides of nitrogen"*[4]

Section 302(j) defines a major stationary source of oxides of nitrogen as:

> *"any stationary facility or source of air pollutants which directly emits, or has the potential to emit one hundred tons per year or more of any air pollutant"*[5]

Therefore, the emission statement requirement is extended to include sources in attainment areas within ozone transport regions which emit, or have the potential to emit 100 tpy or more of NO_x or 50 tpy or more of VOC.

Additionally, if a source emits at least the minimum established reporting level of VOC or NO_x (for example, 25 tpy or more in an ozone nonattainment area), and the other pollutant is emitted at less than 25 tpy, then the other pollutant should also be included in the emission statement. Likewise, for sources in attainment areas of ozone transport regions, if a source emits at least the minimum established reporting level of VOC or NO_x (for example, 50 tpy of VOC or 100 tpy of NO_x), then the other

pollutant should be included even if it is emitted at levels below the specified cutoffs. This provision is consistent with that for SIP emission inventories.

The emission statement provisions call for emission estimates from some sources that are not currently included in the annual point source submittal or the SIP emission inventory. These sources include NO_x emitters in ozone nonattainment areas that emit between 25 and 100 tpy NO_x. (NO_x sources emitting $\geq$ 100 tpy are included in the annual point source submittal and the SIP emission inventory.)

Another category of sources that are not currently covered in the annual point source submittal or the SIP emission inventory but should submit an emission statement, are new VOC sources that emit $\geq$ 25 tpy VOC but less than 100 tpy VOC and that came on line after 1990. These sources are not included in the annual point source submittal because they emit less than 100 tpy VOC and they were omitted from the 1990 base year inventory because they were not operating at that time.

In addition, VOC sources in attainment areas of ozone transport regions that emit between 50 and 100 tpy VOC have not previously been included in either of the two emission reporting programs and will now be requested to submit emission statements. (The cut-off for the annual point source submittal, which includes sources in nonattainment and attainment areas, is 100 tpy VOC.)

A revision of the CFR, addressing both data and status report submittals, is anticipated to occur in order to reflect the requirements of the emission statement program. EPA is anticipating pursuing the rulemaking process to require submittal of the emission statement data. States should therefore consider

setting up their emission statement programs to require that this information be submitted.

1.3 Structure

This guidance document is structured as follows. The general provisions are presented in the next section. Emission statement reporting is discussed in section 3.0, and includes a suggested reporting format. A draft State regulation is presented in section 4.0. Possible actions for noncompliance with the emission statement provisions are discussed in section 5.0. A discussion of the possible uses for emission statement data is provided in section 6.0, and the future of emission statement reporting is examined in section 7.0.

2.0 GENERAL PROVISIONS

This section discusses the conditions under which the emission statement requirements may be waived, details the recommended emission statement data, describes requested State submittals, and reviews other State data responsibilities.

2.1 Waiver of Requirements

As stipulated in the CAAA, States may waive the requirement for emission statements for classes or categories of sources with less than 25 tons per year of actual plant-wide NO_x or VOC emissions if the class or category is included in the base year and periodic inventories and emissions are calculated using emission factors established by EPA (such as those found in EPA publication AP-42) or other methods acceptable to EPA. States should get clearance from the appropriate EPA Regional Office to waive the emission statement requirement for these smaller sources.

Even though sources emitting below 25 tpy plant-wide of VOC or NO_x can be exempted from emission statement requirements, it may not be advantageous for States to do so. These smaller sources can produce a significant amount of emissions, particularly in urban areas. In addition, larger sources have already been controlled to a great extent and the next logical sources to regulate and/or monitor are these smaller sources. Also, for the base year and other required inventories, VOC point sources emitting 10 tpy or greater emissions in nonattainment areas must be inventoried. States may want to set the emission statement threshold at least this low to allow use of emission statement data in preparing emission inventories.

For assistance in locating sources who have not previously submitted emissions data to AIRS, see Appendix A.

2.2 Optional Emission Statement Submittals

The following section describes the source and State supplied information that EPA is requesting to be submitted as part of the emission statement program, and details the proposed data elements. Submittal due dates are presented, and a list of suggested optional data elements is provided.

2.2.1 State Implementation Plan Revision

Section 182(a)(3)(B) of the CAAA requires States with areas in nonattainment of the ozone NAAQS to submit a SIP revision by November 15, 1992. A SIP revision should also be submitted by States with attainment areas that are in ozone transport regions. This revision should require sources that emit or have the potential to emit 50 tpy or more of VOC or 100 tpy of NO_x to submit emission statements. The revised SIP should require the submission of annual emission statements from owners or operators of these applicable stationary sources of NO_x or VOC.

Emission statement SIP revisions will be subject to a "Table 2 " level of review in which EPA headquarters (OAQPS) will be allowed a 30 day period in which to review the SIP revision and provide comments. Final approval authority, however, will reside with the Regional Administrator. A notice in the 54 FR 2214-2225 January 19, 1989 Federal Register initially defined a system for SIP decision authority by establishing three categories of SIP revisions (Tables 1, 2 and 3). Under the Table 2 level of review for SIP actions is listed, "Any other action not listed elsewhere." The emission statement SIP revision would fall in this category because it does not appear in Table 1 or Table 3.

2.2.2 Data and Status Report Submittal Dates

The annual emission statements should include the estimated actual annual and typical ozone season day emissions of NO_x and/or VOC, by segment within the facility. The CAAA specify that the first statements are due from the facility to the State (or appropriate local agency) no later than three years after enactment of the CAAA, and must represent emissions during calendar year 1992. In order to provide time for the States to incorporate their emission statement data into the annual point source submittal (which is due each year on July 1), it is recommended that the due date for the first emission statements be April 15, 1993. The emission statement data can be used by the States to prepare the required annual point source submittal. The emission statement program establishes a data collection procedure and provides segment level emission data to assist in the development of estimations. In order to facilitate the ultimate goal of synchronizing all industry reporting requirements, coordination between emission statement and other reporting requirements, such as the annual statewide point source submittal, and the periodic nonattainment inventory submittal, is strongly recommended.

In addition to the submittal of emission statements and emission statement data, EPA is requesting that States provide an Emission Statement Status Report (see section 2.3.2) and provide emission statement data to the EPA by July 1, 1993 for the first emission statement (to coordinate with the annual point source submittal). Thereafter, emission statements should be submitted annually, but the status report should be submitted to EPA on a quarterly basis until all applicable sources have reported. It would therefore benefit the States to request an April 15 submittal of data from the sources to be able to meet the July 1 date.

2.2.3 Optional Data Elements

Furthermore, States may want to request sources with emissions of SO_2 over 100 tpy, CO over 1000 tpy, or lead over 5 tpy to also report under the emission statement provisions. This emissions data could then be used by States to prepare their annual AFS submittal to EPA. By gathering these data under the emission statement program, States would eliminate the use of two different reporting mechanisms for their annual AFS submittal.

2.2.4 Data Elements Overview

Sources are requested to submit specific data elements to the State (or appropriate local agency) in order to comply with emission statement reporting. The data elements are, to the best extent possible, consistent with other EPA reporting requirements and with EPA data systems.

Under the State-wide point source reporting requirements program and currently as part of the SIP emission inventory requirements, data elements that describe source identification, operating schedule, emissions information, control equipment, and process data are required to be submitted to EPA and are included in the AIRS database. Under the emission statement program, some of these data elements will only need to be updated and certified by sources whose emissions are already included in the annual point source submittal or SIP emission inventories (i.e., these data elements are already in the AIRS database). For those sources whose emissions are not currently included in the annual point source submittal or in the SIP emission inventory, all data elements should be reported initially and then updated and verified annually.

By compiling the emission statement data, facilities and States should be better prepared to meet subsequent reporting

requirements and to provide better quality assurance of emission estimates. In addition, the EPA will be better suited to work towards the ultimate goal of compiling all emission reporting requirements into a single annual effort.

Each emission statement should contain, at a minimum, the following information: certification of data accuracy, source identification information, operating schedule, process data, control equipment, and emissions information. The purpose of requesting the emission statement data is for verification of the emission estimates by the State or Regional Office. A simple estimate of emissions provided by the source without documentation would preclude verification of the estimate if it is in conflict with the State's or EPA's emission estimate. For complete emission statement reporting, data is requested from both sources and States. These suggested data elements are discussed in detail in sections 2.2.6 and 2.2.7.

The AIRS system has been modified to compute rule effectiveness adjusted emissions at the SCC pollutant (segment) level. Therefore, States may use this feature to calculate RE emissions. However, States should ensure that adequate RE information is provided to AIRS so that an accurate adjustment can be made. The necessary data elements to compute RE adjusted emissions are listed as requested emission statement data.

At present, EPA is making changes in the application of RE and in the input of RE data into AIRS that could affect emission statement reporting. Any changes in RE that apply to emission statements will be addressed in a later guidance.

2.2.5 Outline of Recommended Source and State Submittals

A summary of recommended submittals by sources and States for the emission statement program is provided below. The individual items on the lists are described in detail in this chapter.

EPA requests Sources to provide the following:

- Identification of plant
- Operating information
- Process rate data
- Control equipment information
- Emissions estimates
- Certification of data accuracy

EPA requests States to provide the following:

- SIP revision by November 15, 1992
- Identification codes (AIRS, point, segment)
- Value for rule effectiveness
- Source emissions data entered annually into AIRS
- Quarterly emission statement status report
- Specification of peak ozone season to source

2.2.6 Source Supplied Data

The minimum source identification information provided by the source to the State (or appropriate local agency) should include: (1) Full name, physical location, and mailing address of the facility, (2) Latitude and longitude and (3) 4 digit SIC code(s).

Sources should supply their latitude and longitude consistent with EPA's *Locational Data Policy Implementation Guidance*.[6] The guidance, which contains detailed procedures and guidelines for implementing locational policy, recommends the use of a global positioning system (GPS) to most accurately determine latitude and longitude. While sources have the main responsibility for determining their latitude and longitude, for improved accuracy of these locational coordinates, States should assist sources as needed.

An alternative method for locating a source's latitude and longitude is for States to provide a Geological Survey topographical county or regional map with locational coordinates to each source. The source can determine latitude and longitude by locating the facility on the map.

SIC codes and their descriptions can be found in the *Standard Industrial Classification Manual*, published by the Office of Management and Budget.

The minimum operating schedule information provided by the source to the State (or appropriate local agency) should include: (1) Percentage annual throughput (percentage of annual activity by season), (2) Days per week on the normal operating schedule, (3) Hours per day during the normal operating schedule, and (4) Hours per year on the normal operating schedule.

The minimum process rate data provided by the source to the State (or appropriate local agency) should include: (1) Annual process rate (annual throughput)[a], and (2) Peak ozone season daily process rate.

The minimum control equipment information provided by the source to the State (or appropriate local agency) should include: (1) Current primary and secondary control equipment identification codes, and (2) Current combined (if primary and secondary control equipment is used) control equipment efficiency (%). Valid control equipment identification codes are presented in Appendices G and H. States may need to assist the source in determining the type of control equipment that the source is using.

The minimum emissions information provided by the source to the State (or appropriate local agency) should include: (1) Estimated actual VOC and/or NO_x emissions at the segment level, in tons per year for an annual emission rate and pounds per day for a typical ozone season day[b], (2) Estimated emissions method code, (3) Calendar year for the emissions, and (4) Emission factor (if emissions were calculated using an emission factor). Valid estimated emissions method codes are presented in Appendices G and H.

In the event that emission factors are utilized in the calculation of emissions, a source should use emission factors that are approved by EPA or the State. Otherwise, the source should petition the State for approval of their emission factors.

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[a]If annual process rate is given for a fuel process, the data must represent the amount of fuel burned. If the annual throughput is given, then the throughput must correspond to a specific SCC.

[b]Pounds per day information is included because most SIPs and SIP rules are predicated on pounds per day.

Each emission statement should also include a certification of data accuracy to ensure that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. The individual certifying the statement should be an official of the company who will take legal responsibility for the emission statement's accuracy. A sample certification of data accuracy form is provided in Appendix B.

2.2.7 State Supplied Data

In addition to the emission statement data requested from the sources, it is recommended that States supply several additional data elements which are necessary for the annual State submittal of emission statement information into the AIRS database. These data include source identification information and emission information.

The minimum source identification information provided by the State should include: (1) AIRS code, (2) AFS point number (ID), and (3) AFS segment number (ID).

The AIRS code may be assigned prior to sending the Emission Statement Initial Reporting Form to the facility.

The minimum source emission information provided by the State should include: (1) SCC(s) and descriptions for each segment, (2) Current RE factors at the SCC pollutant level, if applicable, and (3) RE method code(s). Valid RE method codes are provided in Appendix C.

States should be aware of the control efficiency applied by a source so that the appropriate emissions values are reported. The emission estimates should be neither over or under corrected as a result of rule effectiveness.

In addition, States should inform sources as to when the peak ozone season occurs, to ensure an accurate estimate of their typical ozone season daily emissions. Information on determining the peak ozone season is provided in Appendix D.

SCC information is provided in the document, *AIRS Facility Subsystem, Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants*. An excerpt from this document is provided in Appendix E.

2.2.8 Source and State Supplied Data Elements by Plant, Point and Segment Level

To aid in determining which emission statement data elements are requested at specific levels of operation, the source and State data elements are categorized under the appropriate reporting level as follows:

Plant level emission statement data: (1) Full name, physical location, and mailing address of the facility, (2) Source 9 digit AIRS code (supplied by the State), (3) Source latitude and longitude, (4) 4 digit SIC code, and (5) Calendar year for the emissions.

Point level emission statement data: (1) Percentage annual throughput (percentage of annual activity by season), (2) Days per week on the normal operating schedule, (3) Hours per day during the normal operating schedule, (4) Hours per year during the normal operating schedule, and (5) AFS point number (supplied by the State).

Segment level emission statement data: (1) Estimated actual VOC and/or NO_x emissions at the segment level, in tons per year for an annual emission rate and pounds per day for a typical ozone season day, (2) Emissions method code, (3) SCC for each of the

emission estimates (supplied by the State unless the source has this information), (4) Current primary and secondary control equipment identification codes, (5) Current control equipment efficiency (%), (6) Annual process rate (annual throughput), (7) Peak ozone season daily process rate, (8) Rule effectiveness factor at the SCC pollutant level (supplied by the State), (9) Rule effectiveness method code (supplied by the State), (10) AFS segment number (supplied by the State), and (11) Emission factor (if emissions were calculated using an emission factor).

2.2.9 Suggested Optional Data

States may augment the recommended emission statement data to better quantify local issues and/or concerns. States may add whatever data elements best serve their needs; however, the following data elements are suggested as useful additions to the emission statement data outlined above.

Suggested optional source identification information[c]: (1) Latitude and longitude method code, (2) Latitude and longitude textual description, (3) Latitude and longitude estimation of accuracy, (4) Stack identification, (5) Number of employees, (6) Plant contact, and (7) Plant phone number.

Suggested optional operating information: (1) Days per week of operation during the peak ozone season, (2) Weeks of operation during the peak ozone season, (3) Start time on both the normal operating schedule and on a typical ozone season day, and (2) End

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[c]These data elements are included in the Office of Administration and Resources Management's *Locational Data Policy Implementation Guidance*, February 1992, (Publication number 220-B-92-008) as necessary locational data that will have to be collected in the future in addition to latitude and longitude. AFS will be modified by early fiscal year 1993 to support these additional data elements.

time on both the normal operating schedule and on a typical ozone season day.

Suggested optional emissions information: (1) Speciated VOC emissions, and (2) other criteria pollutants including sulfur oxides (SO_x), particulate matter (PM_{10}), lead and carbon monoxide.

Suggested optional control equipment information: Capture efficiency (%). This is a measure of the volume of pollutant captured or recovered relative to the volume of pollutant generated.

Suggested optional process rate information: (1) Design capacity, (2) Fuel use data (i.e., heat content), (3) Tank data (i.e., vapor pressure, vapor mole weight, diameter, height, age, loading type, color, fixed roof tank information, and floating roof tank information), and (4) Solvent usage data (i.e., solvent purchased, and solvent reprocessed).

Suggested optional stack information: Stack parameter information (i.e., height and diameter).

2.3 State Submittals to EPA

States are requested to submit several items under the emissions statement provisions. Included among these submittals is a SIP revision which was discussed earlier in this document. In addition, States are requested to submit both source supplied and State supplied data to the EPA via the AIRS database. It is recommended that States also prepare and submit to the EPA an Emission Statement Status Report on a quarterly basis. Both of these data submittals are detailed in the following text.

2.3.1 AIRS Data Submittal

Beginning in 1993, it is recommended that States electronically submit emission statement data into the AIRS database by July 1. After this date, data should be submitted when it is received from sources. A due date of April 15, 1993 for emission statement reporting from the source to the State (or appropriate local agency) will facilitate the State's July 1 AIRS submittal deadline. The emission statement data submittal to AIRS should include all data obtained from the source and the State as listed in the previous text.

2.3.2 Emission Statement Status Report

States should prepare and submit (on paper) to EPA an Emission Statement Status Report which shows the total number of facilities from which emission statement data was requested, the number of facilities that met the provisions, and the number of facilities that failed to meet the provisions. The Emission Statement Status Report should be submitted on a quarterly basis to EPA by no later than July 1, beginning in 1993. This report will be a quarterly submittal until all the regulated sources have complied for the reporting year. The reporting cycle begins

again with the next year's emission statement submittal. Suggested submittal dates for the quarterly status reports are July 1, October 1, January 1, and April 1. Annual and typical ozone season day emissions, both RE-corrected and non RE-corrected, totaled for all sources that submitted emission statements, should be included in the status report. RE-corrected data can be obtained from AIRS (if AIRS is used to calculate RE-corrected emissions) after the emissions information has been submitted to AIRS. In addition, sources that are delinquent in submitting their emission statements should be individually listed if they emit 500 tpy or more of VOC or 2500 tpy or more of NO_x. A detailed listing of the minimum data recommended for the Emission Statement Status Report submittal to EPA is contained in the following text. An example format for the Emission Statement Status Report is provided in Appendix F.

The minimum data suggested for the Emission Statement Status Report submittal to EPA include source identification information and emissions data.

Source identification information should be provided for all sources who fail to submit emission statements and emit 500 tpy or more VOC or 2500 tpy of NO_x. The information should include: (1) Full name of the facility, (2) County code in which the facility is located, (3) AIRS facility ID code, and (4) EPA ID code (FINDS code) for the facility (if already assigned by EPA).

Emission data should include, at a minimum, the following information: Actual VOC and/or NO_x emissions totaled for all sources which submitted emission statements, in tons per year for an annual emission rate and pounds per day for a typical ozone season day, both RE-corrected and non RE-corrected.

2.4 Additional State Data Responsibilities

States are responsible for resolving emission estimate inconsistencies with the sources prior to submittal of the emission statement data to EPA. To avoid data inconsistencies, States need to be available to assist sources, particularly nontraditional sources, with the preparation of the emission statement data. States may need to assist these sources in determining the number of stacks, points, and segments at the facility and to provide them with correct AFS point and segment identification numbers. States will also need to inform sources of the peak ozone season for the area.

States should augment the requested emission statement information with important data that sources, particularly those with no previous emission reporting experience, may not have. These data include the source's SCC and AIRS code, AFS point and segment identification numbers, and current RE factors at the SCC pollutant level. These data elements are not required for the source submittal to the State, but are recommended for the State submittal to the AIRS database. The State could prefill the above information prior to forwarding the emission statement form to the source. The State should prefill the SCC number and description prior to forwarding the form to the source if the source does not have this information so that the source can accurately compute its emissions and process rate data. States could obtain SCC information by sending out a survey to sources requesting descriptions of the processes that a facility carries out. Prior knowledge of these processes would enable the State to fill in the appropriate SCC before sending out the emission statement form. It is recommended that States submit all data, whether provided by the source or the State, into the AIRS database.

States should maintain adequate records of emission statement data and source certifications of emissions submitted to them by sources for a period of at least three years to allow for review or verification of the information as needed.

In order to ensure proper data flow into the AIRS database, States need to be cognizant of the timing of different emission reporting requirements.

2.4.1 Data Consistency

Once the State agency has received the emission statement data from the facility, the data should be verified to ensure that the estimates are reasonable and consistent with State estimates, if such estimates exist. If the estimate was made using an emission factor approach, the State should compare the emission factor, the activity data, and the control efficiency assumptions. If source testing was used to determine the facility estimate, the State may compare the estimate with an emission factor estimate for relative magnitude or reasonableness. Finally, if the estimate represents an engineering judgement or a material balance, the State may wish to provide additional guidance to the facility on how they would like the estimate to be made.

Using either EPA or State-supplied emission factors, the AIRS database can be used to calculate emission estimates. If sources use emission factors to calculate their emissions, States should input the emission factors used by the sources or reconcile the sources' emission estimates with the EPA or other State emission factor. Alternatively, sources could submit their input data to the State without actually calculating their emissions. Emission estimates could then be generated by AIRS using EPA's or the State's emission factors and sent back to the source for verification and certification. States can use any

method to verify consistency in emission values they choose. However, States should make sure that the source-certified emission values are identical to the non RE-corrected emissions in the AIRS database.

2.4.2 Data Confidentiality

The EPA has provisions for maintaining the confidentiality of a limited number of process rate data elements in the AIRS database. Process rate information may be considered confidential by EPA if it is confidential business information and constitutes a trade secret. The data elements requested for emission statements that may be considered confidential include annual process rate and peak ozone season daily process rate.

EPA published a policy statement in the February 21, 1991 Federal Register (Vol. 56, No. 35) regarding EPA's views on the confidentiality of certain emission data. The statement, entitled "Disclosure of Emission Data Claimed as Confidential Under sections 110 and 114(c) for the Clean Air Act,"[d] specifically excludes emission data from the general definition of trade secret information for certain classes of information submitted to EPA under sections 110 and 114 of the CAAA. Emission statements are submitted under section 110 of the CAAA, and thus, certain data elements that are suggested emissions data for emission statements are not considered to be confidential. These data elements are: full name, physical location, and mailing address of the facility; latitude and longitude; SIC code; VOC and NO_x emissions (tpy and lbs/day); estimated emissions method; calendar year for the emissions; and the SCC. If States have questions on specific data confidentiality issues, they should contact their EPA Regional Office on an individual basis.

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[d]Section 1905 of Title 18 of the United States Code.

2.4.3 Data Flow

The CAAA require that a SIP revision, which includes a provision for an emission statement program, be submitted by November 15, 1992. In addition, the CAAA require that the first set of emission statements, representing 1992 emissions, be submitted to the State agency no later than November 15, 1993. Again, EPA strongly recommends that the State agencies schedule the first emission statement data submission for April 15, 1993 and annually on April 15 thereafter. This schedule will allow time for verification of the data prior to the July 1 AIRS/AFS data submittal, which coincides with the due date of the annual point source submittal. Emission statements request the same information as that reported for the point source submittal, with the addition of peak ozone season daily process rate for determining typical ozone season day emissions.

Many types of data are housed in the national AIRS/AFS database. It is important for State agency personnel reporting emission statement data to understand and coordinate with other agency reporting activities to AFS. A potential to override data exists when different agencies (e.g., local and State) or different personnel within an agency update the AIRS database. State agencies should develop and implement procedures to ensure that one set of submittals do not override other submittals accidentally. For example, when submitting permit, emission statement, periodic SIP or other data in AFS batch format, it is important to run the AFS "trial dummy update" to fully understand how the data in the system will change following the update. When uploading data from the SIP Air Pollutant Inventory Management System (SAMS), the AFS compare preprocessor compares the newly submitted data with the existing data in the AIRS database. The results from the preprocessor tell the user whether the new information is a "change", meaning the new data is different from that currently on the database, or if it is an

"add", meaning the data does not exist on the AFS database currently. States should refer to AFS guidance for more detailed information on the data submittal process. It is the responsibility of the State agency to coordinate data updating activities within AIRS.

3.0 EMISSION STATEMENT REPORTING

The EPA has developed a proposed format for the emission statement reporting process. However, the CAAA allow States to develop their own format for emission statement reporting. Emissions data is requested both from facilities that have not previously been asked to submit emission information and from facilities familiar with emissions reporting. Therefore, the emission statement reporting format needs to accommodate different levels of emission estimation experience. To achieve the greatest accuracy possible, while not placing an undue burden on smaller sources, States could adopt a dual emission statement reporting format. Using this approach, traditional sources, those whose emissions are in the AIRS database, would supply emissions information to the State (or appropriate local agency) by revising their AFP644 report. The AFP644 report is an output report of a source's emissions data stored within the AIRS database. Nontraditional sources, those with no previous emissions data on file with the EPA, would be sent an Emission Statement Initial Reporting Form. After the State has entered the nontraditional source's first year's data into AIRS, subsequent emission statement reporting provisions could be met by supplying the source with their AFP644 report for revision.

Regardless of what reporting format is used by sources to submit their emission statement information, both traditional and nontraditional sources should certify the accuracy of their emission statements. No emission statement is considered complete without the certifying individual's signature to attest to data accuracy. The certifying individual should be an officer of the company who will take legal responsibility for the emission statement's accuracy. An example emission statement certification of data accuracy is given in Appendix C.

3.1 Development of Reporting Format

The following format for emission statement reporting is presented as an option for States to consider. It is not necessary for States to collect the emission statement data in the format proposed in this document. States are requested, however, to submit the emission statement data to the EPA by updating the AIRS database. The emission statement data collected by the State should be sufficient to meet the EPA provisions outlined in section 2.2 of this document.

3.2 Traditional Sources

States should send traditional sources copies of their AFS data as presented in the AFP644 report accompanied by instructions and an explanatory letter stating that the data elements be updated and certified for accuracy. The requested data elements for emission statement reporting should be highlighted so that the source can easily identify the data that need to be reviewed.

Appendix G, Part 1 contains an example explanatory letter to be used as an example of appropriate correspondence from the State to traditional sources. The letter contains background information on the emission statement provisions and details the facility's obligations. Appendix G, Part 3 contains instructions to assist sources with the update of their emissions data using the AFP644 report. The letter and instructions are intended as examples of appropriate State guidance to sources. This or similar information should be forwarded to sources along with their AFP644 report. An overview of methods for estimating VOC and NO_x emissions is given in Appendix D.

It is important when States submit emission statement data to the AIRS database that a source be entered into AIRS only once and that the AIRS code and all locational data for the source be accurate and complete. This procedure allows EPA to correctly assign an EPA facility ID code. States should be aware of whether a source already exists in the AIRS database, or is an addition to the database before entering its emission statement data. In addition, States should verify that an EPA facility ID code has been assigned to each new facility whose emission data have been submitted to AIRS. EPA is replacing all references to NEDS/CDS IDS with the EPA facility ID code. EPA updates and assigns these codes on a regular basis. Therefore, States should be able to review sources' AFP644 reports during the year following the sources' initial data submittal to AIRS to determine the EPA facility ID code. A more detailed discussion of the EPA facility ID code is found in Appendix I.

The source should mark directly on the AFP644 report to indicate any changes or corrections. The report should then be forwarded to the State (or appropriate local agency) for State agency personnel to review the new information for consistency. Any inconsistencies should be reconciled between the State and the facility. The State should then enter the emission statement data into AIRS. Data formats and field lengths of emission statement data elements are specified in the *AIRS User's Guide Volume IX: AFS Data Dictionary.*[7]

Alternatively, the State may request that sources submit the emission statement information in a machine readable format, or in some other format developed by the State, to ease the AFS update process. Regardless of the reporting mechanism used, it remains the State's responsibility to detect and resolve inconsistencies in facilities' emission statement data prior to entering the data into the AIRS database.

3.2.1 AFP644 Report

The proposed emission statement reporting format for sources with emissions data in AIRS (i.e., traditional sources) is the AFS AFP644 report. See Appendix G, Part 2 for a sample AFP644 report. The AFP644 report can be accessed via the AFS default report menu or via the ad hoc batch (Quick Look) report screens by designating a report type of "TE" for specifying plants above a "Threshold Emissions" level. The actual menu selection is called "default". The AFP644 output format is predefined, but it can be customized to print various levels of data (plant, stack, point, segment, or any combination). When using the quick look "TE" option to create the AFP644 report, if no threshold emission level is set, the user should request that the system only report emission values greater than zero. This request may significantly reduce the length of the report. The quick look "TE" option also allows the user to select several facilities for which the system should generate AFP644 reports. Using this option, numerous sources' reports can be generated and printed in one job.

Although the AFP644 report can be accessed by running the quick look report type "TE", some States may prefer to run AFP644 as a fixed format report. Screens within the fixed format allow the user choices, such as selecting the level of emissions, which States may find useful.

The AFP644 report was specifically created to serve as a turnaround document for State and/or local agencies to send to facilities. However, States may wish to alter the report prior to sending it to the source to highlight requested data fields and/or adjust the formatting. The report may be altered by sending it to a file rather than a printer. A report saved to a file will be in DOS text format and may be altered by using any

of the numerous available text editors or word processing packages. States may also use AFS to generate mailing labels.

All data elements that are requested from sources for emission statement reporting are highlighted on the example AFP644 report in Appendix G. Additional data elements appear on the AFP644 report; however, only the highlighted data elements are requested to be verified or supplied by the source.

The sample facility (plant) represented in the example report is composed of 2 stacks, 3 points, and 5 segments. On the AFP644 report, specific emission statement information is requested under different levels (i.e., plant, point, and segment) of operation. Plant information is primarily identifying information. Point data are collected for individual stacks or storage tanks and segment level information is collected below the point level. For example, if a boiler operates on either oil or natural gas, as in the example AFP644 report, emissions would be reported for segment 1 for the burning of oil and for segment 2 for the combustion of natural gas. Each segment represents a separate process.

States may use an equivalent alternative to the AFP644 report and instructions, however, the minimum emission statement data elements, as outlined in section 2.2 of this document, should be included. It should be kept in mind that States are requested to enter the emission statement data into the AIRS database regardless of the emission statement reporting mechanism.

3.3 Nontraditional Sources

Nontraditional sources, those with no previous emissions data on file with the EPA or State, should be sent an Emission Statement Initial Reporting Form to report their first year's

emission statement data. The form should be accompanied by an explanatory letter and detailed instructions to assist the sources with accurately completing the requested information.

Appendix H, Part 1 contains an example explanatory letter to be used as an example of appropriate State correspondence to nontraditional sources. The letter provides background information on the emission statement provisions, introduces the initial reporting form, and discusses the facility's obligations. Appendix H, Part 3 contains example instructions to sources for completion of the Emission Statement Initial Reporting Form. These instructions are intended to assist States in developing adequate guidance to ensure consistent emission statement data reporting by sources. Both the letter and instructions are provided as examples. However, States should send this, or similar information, to the source along with the initial reporting form. As mentioned previously, an overview of methods for estimating VOC and NO_x emissions is given in Appendix D.

Due to the fact that nontraditional sources have no previous emission data in the AIRS database, they also may not have certain descriptive information available to them such as their SCC and AIRS code, RE factors at the SCC pollutant (segment) level, and point and segment identification numbers. States are asked to augment nontraditional sources' emission statement submittals with this information. States should prefill the Emission Statement Initial Reporting Form with the above information, where practical. The States should supply the SCC and its description on the Emission Statement Initial Reporting Form (if the source does not have this information) in order for sources to accurately identify their emissions. The SCC description will let the source know what the SCC refers to. It is not necessary to enter this description into AIRS because AIRS automatically provides a description of the SCC upon entry of the SCC into AIRS. As stated earlier, knowledge of a source's

processes could be obtained from a survey sent out to applicable facilities, and this information would enable the State to fill in the appropriate SCC before sending out the emission statement form. The remaining State supplied information may be filled in by States after sources complete the forms. States should also be available to assist sources in determining the correct information for other data elements.

The State should submit all emission statement data, whether provided by the State or the source, to the AIRS database. Once the source has completed the form and the data are entered into the AIRS database, subsequent emission statement provisions may be met by sending the source their AIRS AFP644 report for review and/or correction. Data formats and field lengths of emission statement data elements are specified in the *AIRS User's Guide Volume IX: AFS Data Dictionary*.

3.3.1 Emission Statement Initial Reporting Form

Appendix H, Part 2 contains an example Emission Statement Initial Reporting Form that can be used by States to forward to nontraditional sources for emission statement reporting. The form consists of four pages, one page each for plant and point data and two pages for segment level emission statement data. A second page for the segment level data was developed to accommodate States who wish to collect additional pollutant data through the emission statement process. The additional segment page is not necessary for emission statement reporting; VOC and NO_x data are sufficient.

A shaded "For State Use Only" section is provided for requested State supplied data. As previously stated, States should prefill as much of this information as possible prior to sending the form to the source. Specifically, sources need to know the SCC and its description in order to correctly compute

their emissions and determine the appropriate units for reporting process data. The State should supply this information to sources that do not have access to it. As previously stated, the SCC description does not need to be reported to the AIRS database because the system will provide the appropriate description once the SCC has been entered. The purpose of the description is to aid both source and State personnel working with the forms to understand the type of process for which information is being requested.

The initial reporting form also contains AIRS update screen numbers. These screen numbers will be helpful for States that plan to update the AIRS database in an interactive mode. States using the AIRS batch transmittal may disregard the update screen information. The correct format for AFS batch transmittal can be obtained from the State or Regional AIRS contact or by contacting the National Air Data Branch of the EPA.

When submitting data to AFS using either on-line update screens or batch transmittal, NO_x emissions data (which include both NO and NO_2) should be reported under the data field "NO_2", the appropriate pollutant code. NO_x is not a valid pollutant code for AFS.

States will need to coordinate with the source to ensure that the initial reporting form is adequate to cover all points and segments at the plant. The number of pages sent to the source should reflect the number of points and segments determined to exist at the plant.

The initial reporting form is provided as an option for States to use. States may use alternative reporting forms as long as the minimum emission statement data elements are provided.

4.0 Draft State Regulation

The following draft model State rule can be utilized in the development of the State's emission statement program. The model rule is intended as an example, it does not represent the basis of the criteria that EPA will use to evaluate and approve the State SIP. However, by following the information presented in this guidance document and in the model regulation, States should be able to develop an acceptable regulation and thereby an approvable SIP.

A few States have attainment areas in ozone transport regions. As previously noted, these areas are subject to emission statement requirements. If States do not have such regions, section XX.010 of the draft State regulation should be modified to delete the reference to attainment areas in ozone transport regions.

§XX.010 Applicability

This regulation applies to all stationary sources with emissions of oxides of nitrogen (NO_x) or volatile organic compounds (VOC) in nonattainment areas and also sources which emit, or have the potential to emit, 50 tpy or more of VOC or 100 tpy or more of NO_x in attainment areas within ozone transport regions, with the following exceptions.

Classes or categories of facilities with less than [*25 tons, or appropriate State cutoff*] per year of plant-wide actual VOC or NO_x emissions are exempted from this requirement because these sources are included in the base year and periodic emission inventories. In [*insert State*], the following facility classes or categories are exempted from the emission statement requirement: [*insert list*].

Additionally, if either VOC or NO_x is emitted at or above the minimum required reporting level, the other pollutant must be included even if it is emitted at levels below the specified cutoffs.

§XX.020 Preamble

This draft regulation was prepared in response to section 182(a)(3)(B) of the 1990 Clean Air Act Amendments which requires the preparation and submission of annual emission statements.

Required emission statement data includes plant, point, and segment information. Facilities are required to provide their emissions information at the segment (i.e., process) level only.

§XX.030 Definitions

AIRS Facility Subsystem (AFS) codes as discussed in these definitions may be found in the AFS Data Dictionary. The Data Dictionary can be accessed online through the Time Sharing Option (TSO).

As used in this regulation, the following terms are defined as follows:

(A) "Actual emissions": The actual rate of emissions of a pollutant from an emissions unit for the calendar year or seasonal period.

(B) "Annual process rate": The actual or estimated annual fuel, process or solid waste operating rate.

(C) "Certifying individual": The individual responsible for the completion and certification of the emission statement (i.e., officer of the company) and who will take legal responsibility for the emission statement's accuracy.

(D) "Control efficiency": The actual total control efficiency achieved by the control device(s).

(E) "Control equipment identification code": The AIRS/AFS code which defines the equipment (such as an incinerator or carbon adsorber) used to reduce, by destruction or removal, the amount of air pollutant(s) in an air stream prior to discharge to the ambient air.

(F) "Emission factor": An estimate of the rate at which a pollutant is released to the atmosphere as the result of some activity, divided by the rate of that activity (e.g. production rate or throughput).

(G) "Estimated emissions method code": A one-position AIRS/AFS code which identifies the estimation technique used in the calculation of estimated emissions.

(H) "Fugitive emission": Releases to the air that are not emitted through stacks, vents, ducts, pipes, or any other confined air stream, including fugitive equipment leaks, evaporative losses from surface impoundments, and releases from building ventilation systems.

(I) "Oxides of nitrogen": (or NO_x) In air pollution usage, this comprises nitric oxide (NO) and nitrogen dioxide (NO_2), expressed as molecular weight of NO_2.

(J) "Peak ozone season": That contiguous 3 month period of the year during which the highest ozone exceedances days have occured over a period covering the last 3 to 4 years. Most ozone nonattainment areas have a peak ozone season lasting from June through August. The period used for the 1990 base year ozone SIP inventory should be used for subsequent emission statements.

(K) "Percentage annual throughput": The weighted percent of yearly activity for the following periods:

1) December-February
2) March-May
3) June-August
4) September-November

The first season (Dec-Feb) will encompass 2 calendar years (e.g., Dec '92 - Feb '93).

(L) "Plant": The total facilities available for production or service. Plant level information (e.g., address, latitude/longitude, SIC code) is a required component of emission statement reporting.

(M) "Point": A physical emission point or process within a plant that results in pollutant emissions. A unique identifier (point identification number) exists for each point within each facility in the AIRS database.

(N) "Potential to emit": The capability of a source to emit a pollutant at maximum design capacity, except as constrained by federally-enforceable permit conditions which include the effect of

installed air pollution control equipment, restrictions on the hours of operation, and the type or amount of material combusted, stored, or processed.

(O) "Process rate": Quantity per unit time of any raw material or process intermediate consumed, or product generated through the use of any equipment, source operation, or process. For a stationary internal combustion unit or any other fuel burning equipment, this term means the quantity of fuel burned per unit time.

(P) "Segment": Components of an emissions point or process, at the level that emissions are calculated. One example of a segment is a boiler burning #2 oil. A unique identifier (segment identification number) exists for each segment within each point and plant in the AIRS database. Each segment is also identified by a SCC.

(Q) "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.

(R) "Stack": A (smoke) stack or vent within a plant where emissions are introduced into the atmosphere. A unique identifier exists for each stack within each facility in the AIRS database.

(S) "Stationary source": Any building, structure, facility, or installation which emits, or may emit, any air pollutant subject to regulation under the Act.

(T) "Transport region": A region covering multiple States which may be established by the Administrator whenever interstate transport of pollutants contributes significantly to the violation of National Ambient Air Quality Standards.

(U) "Typical ozone season day": A day typical of that period of the year during the peak ozone season.

(V) "Volatile organic compounds (VOC)": Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical

reactions. This includes any such organic compound other than the following which have been determined to have negligible photochemical reactivity: methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,1-trichloro-2,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (CFC-22); trifluoromethane (FC-23); 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC 114); chloropentafluoroethane (CFC-115); 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1-dichloro 1-fluoroethane (HCFC-141b); 1-chloro 1,1-difluoroethane (HCFC-142b); 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2,-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); and perfluorocarbon compounds which fall into these classes - (1) cyclic, branched, or linear, completely fluorinated alkanes, (2) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations, (3) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and (4) sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

§XX.040 Compliance Schedule

(A) The owner or operator of any facility meeting the applicability requirements stated in §XX.010 must submit an emission statement to the State [*or appropriate local agency*] on an annual basis beginning no later than April 15, 1993 [*or whatever date the State selects*], for the previous calendar year. The emission statement shall include, at a minimum, the data outlined in §XX.050(A).

§XX.050 Requirements

(A) The emission statements submitted by the source to the State [*or appropriate local agency*] shall contain (at a minimum) the following information:

(1) Certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. The certification shall include the full name, title, signature, date of

signature, and telephone number of the certifying individual.

(2) Source identification information:
   (a) Full name, physical location, and mailing address of the facility
   (b) Latitude and longitude
   (c) SIC code(s)

(3) Operating information:
   (a) Percentage annual throughput by season. The first season (Dec-Feb) will actually encompass a two year period. (e.g. December 1991 through February 1992). The remaining seasons (Mar-May, Jun-Aug, Sept-Nov) represent one calendar year (e.g., 1992).
   (b) Days per week on the normal operating schedule
   (c) Hours per day during the normal operating schedule
   (d) Hours per year during the normal operating schedule

(4) Process rate data:
   (a) Annual process rate (annual throughput). The AIRS facility subsystem source classification code table prescribes the units to be used with each source classification code for annual fuel process reporting.
   (b) Peak ozone season daily process rate. The AIRS facility subsystem source classification code table prescribes the units to be used with each source classification code for peak ozone season daily process rate reporting.

(5) Control equipment information:
   (a) Current primary and secondary AFS control equipment identification codes
   (b) Current control equipment efficiency (%). The actual efficiency should reflect the total control efficiency from all control equipment and include downtime and maintenance degradation. If the actual control efficiency is unavailable, the design efficiency or the control efficiency limit imposed by a permit should be used.

(6) Emissions information:
   (a) Estimated actual VOC and/or NO_x emissions at the segment level, in tons per year for an annual emission rate and pounds per day for a typical ozone season day. Actual emission estimates must include upsets, downtime and fugitive emissions, and must follow an "emission estimation method".
   (b) AFS estimated emissions method code
   (c) Calendar year for the emissions
   (d) Emission Factor (if emissions were calculated using an emission factor)

5.0 POSSIBLE ACTIONS FOR NONCOMPLIANCE

Due to the fact that emission statements are a required component of a State's SIP, noncompliance with the emission statement provisions is considered to be a violation of the State Implementation Plan. Any SIP not containing a provision for emission statements will be considered deficient.

Section 113(a)(1) of the CAA describes possible penalties that could be applied to sources if they do not meet the CAAA requirements for emission statement reporting. States should refer to the CAA for a description of the sanction options.

6.0 PROPOSED USES FOR EMISSION STATEMENT DATA

The CAAA require increased reporting and tracking of emissions. The EPA believes that the submission of accurate emission statement data will be helpful for the development, quality assurance (QA), and completeness of several emissions reporting requirements including: tracking of reasonable further progress (RFP), periodic SIP inventories, annual AFS submittal, the operating permit program (Title V), emission trends, and compliance certifications. In addition, the submission of accurate emission estimates by the facilities, and then by the State agencies, will facilitate other State and EPA programs that require emission estimates. These programs include regional modeling efforts, control strategy development, economic analyses of control strategies, and special projects such as reports to Congress.

6.1 Base Year SIP Emission Inventory

Section 182(a)(1) of the CAAA requires all ozone nonattainment areas to submit a comprehensive, accurate, current inventory of actual typical ozone season day emissions from all sources within 2 years of enactment. The first inventory (base year) is due by November 15, 1992, and covers actual typical ozone season day emissions in 1990.

6.2 RFP Tracking

A primary purpose for emission statements is to assist EPA and the States in the determination of RFP in meeting the NAAQS. Annual emission statements will greatly enhance the State agency's ability to track RFP emission reductions. Emission statements will help monitor growth in an area or source category.

As part of the RFP program, moderate and above ozone nonattainment areas must reduce their VOC emissions by at least 15% within 6 years after enactment of the CAAA. A 15% reduction is generally thought to be adequate for moderate areas to attain the ozone NAAQS within the applicable time frame, although a modeling analysis is required to determine if additional reductions are necessary to attain the ozone NAAQS. In addition, serious and above ozone nonattainment areas must achieve VOC reductions after the initial six year period equal to an average of 3% annually until attainment of the standard is achieved. These emission reductions are referred to as "milestones." States must adopt specific measures as part of their control strategy to meet the 15% and 3% per year requirements.

6.3 Periodic SIP Emission Inventories

Section 182(a)(3) requires that ozone nonattainment areas submit periodic inventories every three years until the area is redesignated to attainment. The EPA is recommending that States synchronize their schedules for developing the periodic inventories so that the second periodic inventory, which is based on 1996 emissions and is required by the CAAA no later than November 15, 1998, is actually submitted early in 1997 (by February 13, 1997). By accelerating preparation and submittal of the 1996 periodic inventory, the milestone demonstration (required under section 182 (g)) that is due for serious and above areas by February 13, 1997 can be based on this periodic inventory. If similarly accelerated, future periodic inventories would then also coincide with subsequent milestone demonstrations.

The information included in annual emission statements will facilitate the development of such periodic SIP inventories. Submission of actual annual typical ozone season day emissions and operating information will provide internal QA checks that

will assist in the development of accurate estimates. It should be noted, however, that emission statements alone do not constitute an overall emissions inventory. Emission statements will not reflect area, mobile, and biogenic sources. These other types of sources may also contribute significantly to the composition of accurate emission inventories.

6.4 AIRS Facility Subsystem (AFS) and Annual Point Source Reporting

AIRS is EPA's database for airborne pollution in the United States. AFS, one of four subsystems within the AIRS database, is a national software system which contains emission and compliance information for individual facilities. Data from the emission statements will be used to update and augment current AFS information.

The Office of Air Quality Planning and Standards (OAQPS), which maintains the AIRS database, requires State agencies to submit annual AFS reports for all stationary sources emitting over 5 tons per year of lead, 1,000 tons per year of carbon monoxide or over 100 tons/year of any other criteria pollutant. This requirement is detailed under Title 40 of the *Code of Federal Regulations*, Part 51, section 51.321 - 51.323.

It is hoped that the emission statement provisions and their compatibility with SIP reporting requirements will assist the States in obtaining better data from the facilities and that this will result in more accurate, frequent, and complete AFS submittal by the State agencies.

States may use existing State computer systems for gathering and reviewing emission statement data. However, the data should ultimately be entered into AIRS/AFS by the State.

6.5 Permit Program

Within 3 years of enactment of the CAAA, States must submit proposed permit programs to EPA for approval. Sources subject to the program must submit complete permit applications within 1 year after a State program is approved by EPA or, where the State program is not approved, within 1 year after a program is promulgated by EPA. Permits will be for a fixed term, not to exceed 5 years. Sources should develop a permit application with data that correspond with their emission statement information. Permit programs shall be submitted by major sources starting in November of 1992, and approval by EPA shall take place within one year of this submittal. Permit applications are due starting in November of 1994, and a permit shall be issued within 18 months after the application is received by EPA. The permit regulations were proposed in the *Federal Register*, May 10, 1991, Volume 56, number 91, pages 21712 - 21781. The permit program regulations will be located in Part 70 and Part 71 of Title 40 of the *Code of Federal Regulations*.

Emission statements will assist State agencies in the review of permit program data by providing a data source for the quality assurance of permit applications. When emission statement programs are implemented across all nonattainment areas, the State agencies will not be limited to emission data from facilities in their State, but can access relevant data across the nation. Emission statements will be a requirement contained within the Title V permit program.

6.6 National Emission Trends

National emission trends are computed annually using the previous year's economic and production data and standard emission factors to develop and revise trends in emissions. The national emission trends estimation methods were developed to

provide a surrogate indicator of the nation's emissions. Historically, national emission trends have not accounted for plant by plant variations in emissions.

When new data are introduced or the emission estimation procedure is revised, the national emission trends are recalculated for the previous years, back to the year 1940. Recalculation ensures that emissions are calculated using a consistent method thereby illustrating trends in emissions and not changes in the estimation method. The national emission trends require annual computation of area and mobile source emission estimates.

The national emission trends estimation procedures are undergoing revision so that the national emission trends estimates correspond more closely with the State totals as reported through AFS. In addition, there is new focus on regional trends in emissions. Emission statement data will be utilized by EPA in the new national emission trends procedures.

6.7 Compliance Certifications

The EPA will publish enhanced monitoring and compliance certification (EM/CC) rules in accordance with Title VII of the 1990 Clean Air Act Amendments. The following information is based upon the Public Information Document dated August 1991 and may or may not be part of the final regulations.[8]

Section 702(b) of the CAAA empowers EPA to require certain stationary sources of air pollution to install and operate enhanced monitoring equipment and to submit compliance certifications.

The owner or operator of a major stationary source must certify compliance with all applicable requirements under the

CAAA to the permitting authority at least annually. If the source fails to be in compliance, quarterly deviation reports based on enhanced monitoring must be submitted to the permitting authority until the source meets the emission limits or standards applicable to a "major" pollutant. As currently proposed, the quarterly deviation reports will be required only if actual deviations based upon enhanced monitoring are noted. Furthermore, the deviation reports will be similar to excess emissions reports currently submitted under the New Source Performance Standards (NSPS) program and will include information pertaining to both the emissions unit and the monitoring system.

The specific information required in the annual compliance certification will be detailed in the forthcoming EM/CC regulations. As stated in the August 1991 Public Information Document, "the monitoring system must provide, where available, a direct measurement of emissions, or if direct measurement is not economical or technologically available, then the most reliable compliance data on the most frequent basis that is reasonable...". Currently, the quarterly deviation reports are required to have the following information: (1) the number and duration of deviations from the standard that are documented by the enhanced monitoring system, (2) the reason for deviations and the corrective/preventative action taken in response, (3) the number and duration of incidents during which the monitoring system was not operating or was not producing valid data and the reasons, corrective action and preventative actions taken, (4) basic source identification, and (5) total operating time of the emissions unit during the reporting period.

Enhanced monitoring data will play an important role in the verification of emission statement information. This data will be available from sources subject to EM/CC rules.

6.8 Progress Toward Attainment

The primary purpose of requiring SIP revisions is to show compliance with goals towards bringing an area into compliance with the NAAQS. Emission statements will assist the State and local agencies in assessing progress along this path. In particular, emission statements will enable an agency to quantify actual emissions on an annual basis for comparison with SIP projections. The ability to annually quantify actual emissions will provide an early warning to help agencies determine if corrective actions are required to meet SIP obligations.

6.9 Rule Effectiveness

By reporting actual emissions, the emission statements can be analyzed against existing rules and permits to gauge where rule effectiveness studies should be conducted. EPA has issued separate guidance on rule effectiveness determinations.[9,10]

The emission statement guidance does not require sources to submit RE adjusted emissions to the State (or appropriate local agency) to comply with the emission statement provisions. However, EPA requests that States submit the appropriate RE factor at the SCC pollutant level so that the AIRS database can accurately adjust the sources' emission estimates to reflect RE. The AIRS database will store both RE-corrected and non RE-corrected emissions. The AIRS system will be modified to maintain RE information to develop consistency with SIP emission inventory submittals in which emissions data are adjusted for rule effectiveness.

As stated previously, EPA is making changes in the application of RE and in the input of RE data into AIRS that could affect emission statement reporting. Any changes in RE

that apply to emission statements will be addressed in a later guidance.

7.0 FUTURE OF EMISSION STATEMENT REPORTING

The long-term plan for industry reporting requirements is to merge requirements into a single annual submittal for permits, compliance, annual AFS data, emission statements, and any other applicable requirements.

The recommended emission statement data elements are consistent, where practical, with other reporting requirements. This consistency will assist both the EPA and the States with consolidating data reporting and will also assist in quality assurance and consistency of data.

8.0 REFERENCES

1. U.S. Environmental Protection Agency. 1985. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources. Supplements A through D. No AP-42, Research Triangle Park, NC. 888 pp.

2. Clean Air Act Amendments of 1990, Conference Report to Accompany S. 1630. 101st Congress, Second Session, House of Representatives Report 101-952. October 26, 1990.

3. Ibid.

4. Ibid.

5. Ibid.

6. U.S. Environmental Protection Agency. 1991. Office of Administration and Resources Management. Locational Data Policy Implementation Guidance. February, 1992. Publication number 220-B-92-008.

7. U.S. Environmental Protection Agency. National Air Data Branch. AIRS User's Guide Volume IX: AFS Data Dictionary. January 1992.

8. U.S. Environmental Protection Agency. 1991. Public Information Document: Enhanced Monitoring and Compliance Certification. Air docket number A-91-52. August, 1991.

9. U.S. Environmental Protection Agency, Ozone and Carbon Monoxide Programs Branch, Office of Air Quality Planning and Standards. 1989. Procedures for Estimating and Applying Rule Effectiveness in Post-1987 Base Year Emission Inventories for Ozone and Carbon Monoxide State Implementation Plans. June, 1989. (update anticipated in May of 1992)

10. U.S. Environmental Protection Agency. 1988. Implementation of Rule Effectiveness Studies. Memorandum from John Seitz, Director, Stationary Source Compliance Division, Office of Air Quality Planning and Standards, to Regional Air Division Directors, Office of Air Quality Planning and Standards. March 31, 1988.

APPENDIX A

Locating Sources

While locating traditional sources for inclusion in the emission statement process will not be difficult due to previous emission information requirements, finding the nontraditional sources presents more of a challenge.

The firm of Dun and Bradstreet (D&B) maintains a database on businesses in the United States. The database can be accessed by modem through the EPA Facility and Company Tracking System (FACTS) system maintained by OIRM. The D&B data in the FACTS system is updated annually in June. Customized reports of the D&B data can be created based upon numerous variables including business size, SIC code, and location. States interested in accessing the FACTS database should call the FACTS help line at (800) 424-9067.

Other sources that may prove valuable for locating sources include: State permit program and enforcement files, local yellow pages, and business and trade listings.

APPENDIX B

Example Certification of Data Accuracy

SAMPLE CERTIFICATION OF DATA ACCURACY

The data presented herein represents the best available information and is true and accurate to the best of my knowledge.

_____ _____

Print Full Name Print Full Title

_____ _____

Signature Date of Signature

(_____)_____

Telephone Number

APPENDIX C

Rule Effectiveness Method Codes

DATA ELEMENT NAME: **RULE EFFECTIVENESS PERCENT METHOD CODE**
DESCRIPTION .... : A ONE-CHARACTER CODE USED TO IDENTIFY THE METHOD USED TO DETERMINE RULE EFFECTIVENESS.
FORMAT ..... : ALPHANUMERIC
LENGTH ..... : 1.0
VALID VALUES ... :

C - DIRECT CALCULATION OF EMISSIONS BY SOLVENT USE, ALL SOLVENT EMITTED IN TIME PERIOD.
D - DEFAULT VALUE (80%)
E - SOURCE IN COMPLIANCE DUE TO IRREVERSIBLE PROCESS THAT ELIMINATES SOLVENT USE.
L - LOCAL CATEGORY SPECIFIC RULE EFFECTIVENESS FACTOR - NOT EPA REGULATED.
M - CONTINUOUS EMISSIONS MONITORS
N - SOURCE NOT SUBJECT TO REGULATIONS

APPENDIX D

Estimating Emissions

Annual Emissions

The basic methodologies for computing estimated annual emissions are contained in the EPA document, *Procedures for the Preparation of Emissions Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources* (Procedures Document).[1] These methodologies are discussed in this guidance document; however, this discussion is not intended to supersede information in the Procedures Document mentioned above. For a complete description of emission calculations the reader should refer to the Procedures Document. For emission statement reporting, all annual emissions should be reported as a tons per year value. When estimating annual VOC emissions, methane, ethane, and chloroflourocarbons are to be excluded from the estimate because these compounds are considered to be photochemically non-reactive (see the definition of volatile organic compounds in the Definitions section of this document).

Point source emission estimates can be calculated through the use of source test data, material balances, and emission factors. States must be available to assist sources, particularly nontraditional sources, with the calculation of their emission estimates.

The estimation of emissions through source test data involves the use of test data obtained by the State or local agency or provided by the source. The use of source test data reduces the number of assumptions regarding the applicability of generalized emission factors, control device efficiencies,

equipment variations, or fuel characteristics. Most source test reports summarize emissions for each pollutant by expressing them in terms of a mass loading rate, an emission factor or a flue gas concentration. Emissions estimated through source test data should be adjusted to account for typical operating conditions, average control equipment downtime, effects of start-up, and other factors that affect emission rates over the year.

Emission calculations from emission factor or mass loading rate data are rather straightforward. For example, if the source test determined that the average VOC emission rate for the calendar year was 12 lbs/hour, emissions could be determined in the following manner (emissions rate X operating data).

12 lbs/hour X 16 hrs/day = 192 lbs/day
192 lbs/day X 350 days/year = 67,200 lbs/year, or
33.6 tons per year of VOC

The emission estimate should be adjusted to include emissions produced above the 12 lbs/hour normal operating rate such as when the control equipment malfunctions or an upset occurs. The estimate should also reflect plant downtime and fugitive emissions.

Emission calculations using test results expressed in terms of VOC concentrations can be more complex. The Procedures Document provides a detailed example of such an emission calculation.

Continuous emission monitoring (CEM) can provide a more accurate representation of emissions than a single source test such as was used in the example above. CEM also provides emission measurement data when control equipment malfunctions or is not operating. A further move away from using annual stack tests to the use of continuous monitoring data for compliance

purposes was addressed in the CAAA in the requirement for an Enhanced Monitoring and Compliance Certification rule that applies to major stationary sources. It is recommended that for sources for which continuous monitoring data is available, it should be used to estimate emissions for emission statements because of improved accuracy in emissions measurements.

Use of a material balance involves the examination of a process to determine if the emissions can be estimated solely on knowledge of specific operating parameters and material compositions. Although the material balance is a valuable tool in estimating emissions from many sources, its use requires that a measure of the material being "balanced" be known at each point throughout the process. If such knowledge is not available, and is therefore assumed, serious errors may result. The simplest material balance method is to assume that all solvent consumed by a source process will be evaporated during that process. In this instance, in order to estimate emissions, the only information necessary is the total amount of solvent utilized during the appropriate time interval. Not all material balances are so easily computed. The Procedures Document provides several additional examples of more complicated material balance computations. In addition, material balances cannot be applied in some evaporation processes because the amount of material lost is too small to be determined accurately by standard measurement procedures. In these cases, emission factors will have to be applied.

Emission factors are one of the most useful tools available for estimating emissions. An emission factor is an estimate of the quantity of pollutant released to the atmosphere as a result of some activity. As a rule, the most reliable emission factors are those based on numerous and representative source tests or on accurate material balances. In the event that emission factors are utilized in the calculation of emissions, a source must use

emission factors that are approved by EPA or the State. Otherwise, the source must petition the State for approval of their emission factors. The publication, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, no. AP-42*[2], contains the preferred emission factors to use in estimating emissions. Another EPA document, *AIRS Facility Subsystem, Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants* provides emission factors for all SCCs. Although many of the emission factors contained in this document are derived directly from *AP-42*, these factors do not supersede those listed in *AP-42*. However, this publication does contain some supplemental emission factors that *AP-42* doesn't list. If the emission factor accounts for control efficiency, both a controlled and uncontrolled emission factor will be listed. Both of these documents can be accessed through EPA's CHIEF bulletin board. This system serves as a clearinghouse for the most recent information concerning emission inventories and emission factors. Public access requires an EPA-approved registration, a computer, a communications software package, and a modem. For information on CHIEF, call the CHIEF INFO information line at (919) 541-5285.

In the simplest of cases, a source's emissions can be calculated by multiplying the appropriate emission factor by the activity data (i.e., process rate). However, when empirical formulas are available, more detailed computations may be needed to estimate emissions. For example, additional computation is required when emissions are affected by temperature, (e.g. organic liquid storage tanks and loading of rail tank cars, tank trucks, and marine vessels). The Procedures Document provides a detailed example of emissions calculation for external floating roof tanks. In addition, the Procedures Document provides an in-depth discussion of the effect of seasonal temperature changes upon emissions.

All emissions, both from significant and minor processes within the plant, need to be a part of the emission estimate. In addition to estimating such emissions from distinct process vents in a facility, fugitive emissions should also be included in the estimate. Fugitive emissions are emissions that are released to the air through a means other than stacks, vents, ducts, pipes, or any other confined air stream. Examples of fugitive emissions include uncontained releases from wastewater treatment, tank and drum cleaning, miscellaneous solvent losses, and leaking valves.

Typical Ozone Season Day Emissions

The basic methodologies for computing typical ozone season day emissions are also contained in the Procedures Document. Typical ozone season day emissions should be calculated for the 3 month contiguous period identified in the 1990 base year ozone SIP inventory. For emission statement reporting, all typical ozone season day emissions should be reported as a pounds per day value. When VOC emission estimates are determined, methane, ethane and chloroflourocarbons are not included in the estimate because these compounds are considered to be photochemically nonreactive (see the definition of volatile organic compounds in the Definitions section of this document).

In general, the emission estimation methodologies are analogous to the procedures for estimating annual emissions. The major difference relates to the operating and process rate data. Where the process rate used for calculating estimated annual emissions is an annual rate, the process rate for typical ozone season day emissions is a daily rate averaged over the appropriate peak ozone season.

It is fairly straightforward and accurate for sources to compute their typical ozone season day emissions based upon their peak ozone season daily process rate. The peak ozone season daily process rate is a recommended emission statement data element.

To calculate the typical ozone season day emissions using the peak ozone season daily process rate, the process rate is multiplied by an EPA or State approved emission factor. If, for example, a dry cleaning facility cleans 115 pounds of clothing per day during the peak ozone season, the typical ozone season day emissions are calculated by multiplying the process rate of

115 lbs/day by the correct emission factor. In this example, an emission factor of 550 lbs of VOC emissions per ton of clothes cleaned is used, and a control efficiency of 70% is applied. This is an uncontrolled emission factor, and the efficiency of the source's control equipment should be factored in (multiply by (1-control efficiency). The typical ozone season day emissions are calculated as follows (emission factor X typical ozone season daily process rate).

115 lbs/day of clothes cleaned
115 ÷ 2000 = .0575 tons/day of clothes cleaned
.0575 tons/day X 550 lbs of VOC/ton of clothes cleaned =
31.625 pounds/day X (1-.70) = 9.49 pounds of VOC emissions during the peak ozone season.

As with the annual emissions, significant and minor process and fugitive emissions should be included in the estimate. Typical ozone season day emissions must represent an average daily estimate during the peak ozone season. In order for sources to compute their daily process rate and emissions during the peak ozone season, States must tell the sources what the peak ozone season is.

Most ozone nonattainment areas will use the 3 month period from June through August to calculate peak ozone season daily activity rates. However, if the peak ozone season is atypical, the appropriate 3 month period may have been determined. States should instruct sources to use the same peak ozone season period in emission statements that was used in the 1990 base year ozone SIP emission inventories for the associated nonattainment area.

1. U.S. Environmental Protection Agency. 1991. Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone, Volume I: General Guidance for Stationary Sources. May, 1991. Publication Number EPA-450/4-91-016.

2. U.S. Environmental Protection Agency. 1985. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources. Supplements A through D. No AP-42, Research Triangle Park, NC. 888 pp.

APPENDIX E

EXCERPT FROM:

AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants

A revised AIRS Facility Subsystem Source Classification Code Document will be published in 1992.

AIRS Facility Subsystem

Source Classification Codes and Emission Factor Listing

for Criteria Air Pollutants

EPA Document Number: EPA 450/4-90-003

Prepared by the

MONITORING & REPORTS BRANCH and the
NATIONAL AIR DATA BRANCH

Technical Support Division
Office of Air Quality Planning & Standards

U.S. ENVIRONMENTAL PROTECTION AGENCY

Research Triangle Park, North Carolina 27711

MARCH 1990

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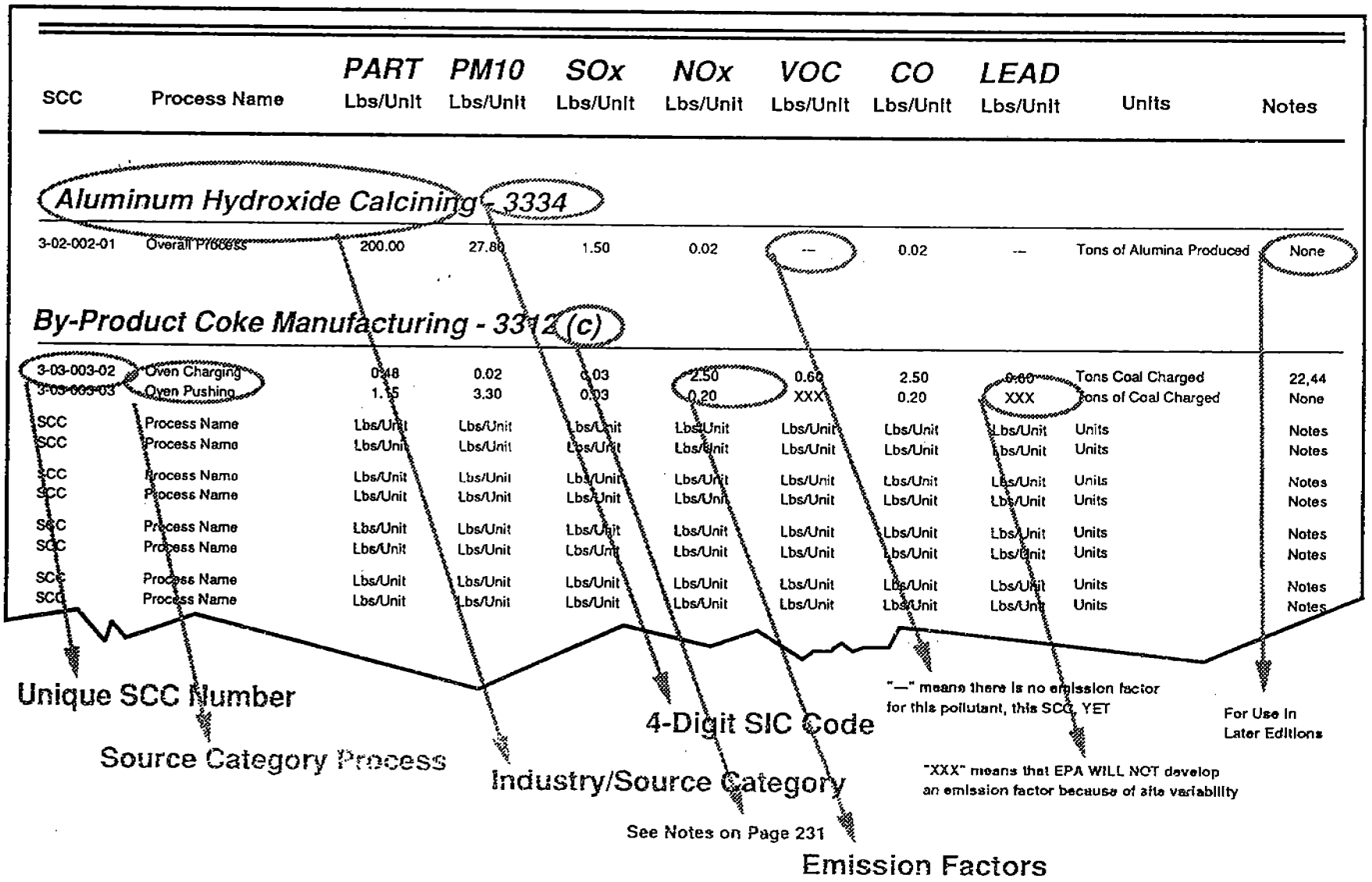


SCC	Process Name	PART Lbs/Unit	PM10 Lbs/Unit	SOx Lbs/Unit	NOx Lbs/Unit	VOC Lbs/Unit	CO Lbs/Unit	LEAD Lbs/Unit	Units	Notes
Aluminum Hydroxide Calcining - 3334										
3-02-002-01	Overall Process	200.00	27.80	1.50	0.02	--	0.02	--	Tons of Alumina Produced	None
By-Product Coke Manufacturing - 3312 (c)										
3-03-003-02	Oven Charging	0.48	0.02	0.03	2.50	0.60	2.50	0.60	Tons Coal Charged	22,44
3-03-003-03	Oven Pushing	1.55	3.30	0.03	0.20	XXX	0.20	XXX	Tons of Coal Charged	None
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes
SCC	Process Name	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Lbs/Unit	Units	Notes

Unique SCC Number

Source Category Process

Industry/Source Category

4-Digit SIC Code

"—" means there is no emission factor for this pollutant, this SCC, YET

"XXX" means that EPA WILL NOT develop an emission factor because of site variability

For Use In Later Editions

See Notes on Page 231

Emission Factors

SCC	Process Name	PART Lbs/Unit	PM10 Lbs/Unit	SOx Lbs/Unit	NOx Lbs/Unit	VOC Lbs/Unit	CO Lbs/Unit	LEAD Lbs/Unit	UNITS	NOTES
EXTERNAL COMBUSTION BOILERS										
EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION - SIC 4911 *(a)*										
Anthracite Coal - 4911										
1-01-001-01	Pulverized Coal	10.0 A	2.3 A	39.0 S	18.0	0.07	0.6	0.0133	Tons Burned	
1-01-001-02	Traveling Grate (Overfeed) Stoker	9.1	4.8	39.0 S	10.0	0.07	0.6	0.0133	Tons Burned	
Bituminous Coal - 4911										
1-01-002-01	Pulverized Coal: Wet Bottom	7.0 A	2.6 A	39.0 S	34.0	0.07	0.6	0.0133	Tons Burned	
1-01-002-02	Pulverized Coal: Dry Bottom	10.0 A	2.3 A	39.0 S	21.0	0.07	0.6	0.0133	Tons Burned	
1-01-002-03	Cyclone Furnace	2.0 A	0.26 A	39.0 S	37.0	0.07	0.6	0.0133	Tons Burned	
1-01-002-04	Spreader Stoker	60.0	12.0	39.0 S	14.0	0.07	5.0	0.0133	Tons Burned	
1-01-002-05	Traveling Grate (Overfeed) Stoker	16.0	6.0	39.0 S	7.5	0.07	6.0	0.0133	Tons Burned	
1-01-002-12	Pulverized Coal: Dry Bottom (Tangential)	10.0 A	2.3 A	39.0 S	15.0	0.07	0.6	---	Tons Burned	
1-01-002-17	Atmospheric Fluidized Bed Combustion	---	---	14.0	13.0	0.07	---	---	Tons Burned	
Subbituminous Coal - 4911										
1-01-002-21	Pulverized Coal: Wet Bottom	7.0 A	2.6 A	35.0 S	34.0	0.07	0.6	0.0133	Tons Burned	
1-01-002-22	Pulverized Coal: Dry Bottom	10.0 A	2.3 A	35.0 S	21.0	0.07	0.6	0.0133	Tons Burned	
1-01-002-23	Cyclone Furnace	2.0 A	0.26 A	35.0 S	37.0	0.07	0.6	0.0133	Tons Burned	
1-01-002-24	Spreader Stoker	60.0	12.0	35.0 S	14.0	0.07	5.0	0.0133	Tons Burned	
1-01-002-25	Traveling Grate (Overfeed) Stoker	16.0	6.0	35.0 S	7.5	0.07	6.0	0.0133	Tons Burned	
1-01-002-26	Pulverized Coal: Dry Bottom (Tangential)	10.0 A	2.3 A	35.0 S	15.0	0.07	0.6	---	Tons Burned	

APPENDIX F

Example Emission Statement Status Report

SAMPLE FORMAT FOR
EMISSION STATEMENT STATUS REPORT

Date: _____ **State:** _____

Year of Emissions: _____

Total Number of Sources Required to Submit Emission Statements: _____

Total Number of Sources that:

Have submitted Emission Statements _____

Have not submitted Emission Statements _____

Total Actual VOC Emissions

(Sum of Emissions from All Sources who Submitted Emission Statements)

Non RE-Corrected	RE-Corrected
Annual Emissions:	**Annual Emissions:**
_____ Tons/year	_____ Tons/year
Typical Ozone Season Day Emissions:	**Typical Ozone Season Day Emissions:**
_____ Pounds/day	_____ Pounds/day

Total Actual NOx Emissions

(Sum of Emissions from All Sources who Submitted Emission Statements)

Non RE-Corrected	RE-Corrected
Annual Emissions:	**Annual Emissions:**
_____ Tons/year	_____ Tons/year
Typical Ozone Season Day Emissions:	**Typical Ozone Season Day Emissions:**
_____ Pounds/day	_____ Pounds/day

SAMPLE FORMAT FOR
EMISSION STATEMENT STATUS REPORT

Sources emitting ≥ 500 tpy of VOC that have failed to submit Emission Statements:

Plant Name	County Code	AIRS ID	EPA ID

Sources emitting ≥ 2500 tpy of NOx that have failed to submit Emission Statements:

Plant Name	County Code	AIRS ID	EPA ID

APPENDIX G

Emission Statement Reporting Package for Traditional Sources

Appendix G is composed of 3 parts: an explanatory letter, an example AFP644 report, and example instructions to complete the report. These 3 elements complete the package of information necessary for States to supply to traditional sources for emission statement reporting.

APPENDIX G
Part 1

Example State Letter to Traditional Sources

Date

Air Emissions Official
Gasoline Distributors, Inc.
101 Refinery Blvd.
City, State 99999

Dear Air Emissions Official:

Under the 1990 Clean Air Act Amendments (CAAA), States are required to revise their State Implementation Plans to include the requirement that certain firms submit annual stationary source emission statements to the State in which they operate. Emission statements will provide the State with an estimate of a source's emissions, and are required from all sources in ozone nonattainment areas emitting [*insert State cutoff, if applicable*] nitrogen oxides (NO_x) or volatile organic compounds (VOC). This requirement also applies to sources in attainment areas within ozone transport regions which emit or have the potential to emit 50 tons per year or more of VOC or 100 tpy or more of NO_x.

Based upon [*cite State statutes or regulations*], your firm is required to submit an emission statement. The first emission statement from your firm must be submitted to [*insert name of appropriate State or local agency*] by [*April 15 or whatever date is required by the State*]. The emission estimates must represent the actual annual emissions of NO_x and VOC for calendar year 1992. The emission estimate must include an estimate of emissions from normal operations as well as any emissions that may have resulted from malfunctions.

Emissions data for your firm are already on file with the EPA. Therefore, an update of your firm's emissions data as

maintained in the Environmental Protection Agency's Aerometric Information Retrieval System (AIRS) database is sufficient. The current AIRS emissions data (AFP644 report) for your firm is attached for your review. Updates should be noted directly on the form and the form must then be returned to the [*insert name of appropriate State or local agency*]. Detailed instructions regarding the update of your AFP644 report are also provided.

A certification of data accuracy must be included with your emissions corrections to successfully comply with the emission statement requirement. The certification of data accuracy must state that all information being submitted is complete, true, and accurate to the best knowledge of the certifying individual. The certifying individual is defined to be an official of the company who will take legal responsibility for the emission statement's accuracy. The certifying individual's signature on the certification of data accuracy is essential for the completeness of the emission statement. No emission statement will be accepted without a signed statement.

Failure to comply with the emission statement requirement may result in a civil action, a civil penalty, or both. State sanctions for noncompliance include [*insert sanctions*].

Questions about the new CAAA emission statement requirement and emission reporting should be directed to [*the appropriate contact at the State*]. This contact can be reached at: [*insert phone number*].

Sincerely,

Jane Smith
Director of Air Quality

APPENDIX G
Part 2

Example AFP644 Report

The example facility (plant) represented in this form is composed of 2 stacks, 3 points, and 5 segments. Of the three points, 2 are stacks and 1 is a tank. The first point is a stack on a boiler that operates on distillate oil (segment 1) and natural gas (segment 2). The second point has no stack and includes fixed roof tanks that have breathing loss emissions (segment 1) and working loss emissions (segment 2). The third point is the second stack. It emits pollutants from the spray painting of widgets (segment 1).

DATE: 01/29/92 **AFS PLANT EMISSIONS INVENTORY** PGM: AFP644
SAMPLE OF AFS AFP644 REPORT PAGE: 1

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY: 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

PLANT NAME: **SAMPLE PLANT**
ADDRESS : **101 MAIN STREET**
CITY,STATE: **RALEIGH,NC 27622**
AQCR : 166

LAST PLANT UPDATE : 92/01/27
REGIONAL PLANNING :
LOCAL CONTROL REGN:
INSPECTOR : ERIC JOHNSON
AMBIENT MONITORING: N SOURCE MONITORING: Y

STANDARD INDUSTRIAL CLASSIFICATIONS:
3714 - **MOTOR VEHICLE PARTS & ACCESSORIES**
-
-

MAILING ADDRESS:
NAME : **SAMPLE PLANT**
ADDRESS : **101 MAIN STREET**
CITY,STATE: **RALEIGH,NC 27622**

NEDS : 9999
EPA ID NUMBER : NCD000555888 DUNN & BRADSTREET : DBXX81589 CDS : 99999

EMISSIONS CONTACT : JOHN SMITH, (919)541-5582
LATITUDE : **36:14:12** UTM ZONE : 17 EMERGENCY CONTROL PLAN : 2 - ECAP SUBMITED
LONGITUDE : **080:59:20** HORIZONTAL : 501.0 KM STATE DATA ELEMENT 1 :
VERTICAL : 4010.0 KM STATE DATA ELEMENT 9 :
USER PLANT ID : NUMBER OF EMPLOYEES : 125 PROPERTY AREA (ACRES) : 10.0
PRINCIPAL PRODUCT : AUTO PARTS

PLANT POLLUTANT:

POLLUTANT	ESTIMATED	UNITS	ALLOWABLE	UNITS	POT. UNCTRL	UNITS	POT. CNTRL	UNITS	ACTUAL UCNTRL	UNITS
NO2	28.14000	TY	40.00000	TY	350.00000	TY	48.00000	TY		
VOC	205.5638	TY	225.0000	TY	2010.0000	TY	280.0000	TY		

POLLUTANT	CO DAILY	UNITS	OZONE DAILY	UNITS	ADJUSTED	UNITS
NO2	220.0000	PD	260.0000	PD		
VOC	1650.0000	PD	1725.000	PD		

PLANT COMMENT:

COMMENT NO.	COMMENT
001 E	THIS IS A TEST COMMENT. PLANT LEVEL COMMENTS ARE FOR THE PLANT AS A WHOLE.

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY: 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

STACK INFORMATION: 001 - STACK FOR BOILER #1

STACK HEIGHT (FT)	: 100	EXIT GAS TEMPERATURE (F)	: 350	EMISSION RECORDER	: N
STACK DIAMETER (FT)	: 5.00	GAS FLOW RATE (ACFM)	: 33000	STACK LINING	: 2 - REFRACTORY
PLUME HEIGHT (FT)	:	EXIT GAS VELOCITY (FT/SEC)	: 25.0	ROUGH. TERRAIN IND.	: N
UTM HORIZONTAL	: 0.00 KM	LATITUDE	: 36:14:13	GEP STACK HEIGHT (FT)	: 94
UTM VERTICAL	: 0.00 KM	LONGITUDE	: 080:59:19	GEP BUILDING HEIGHT (FT)	: 25
				GEP BUILDING LENGTH (FT)	: 85
STACK TYPE CODE: V - A STACK WITH AN UNOBSTRUCTED OPENING DISCHARGING IN A VERTI				GEP BUILDING WIDTH (FT)	: 60

POLLUTANT	ESTIMATED UNITS	MEASURED UNITS	METHOD
NO2	28.14000 TY	-	
VOC	845.6000 PY	-	

POLLUTANT	CO DAILY UNITS	OZONE DAILY UNITS	ADJUSTED UNITS
NO2	220.0000 PD	260.0000 PD	
VOC	3.000000 PD	4.000000 PD	

STACK INFORMATION: 002 - SPRAY BOOTH VENT

STACK HEIGHT (FT)	: 50	EXIT GAS TEMPERATURE (F)	: 100	EMISSION RECORDER	: N
STACK DIAMETER (FT)	: 2.00	GAS FLOW RATE (ACFM)	: 9500	STACK LINING	: 1 - METAL
PLUME HEIGHT (FT)	:	EXIT GAS VELOCITY (FT/SEC)	: 50.0	ROUGH TERRAIN IND.	: N
UTM HORIZONTAL	: 0.00 KM	LATITUDE	: 36:14:12	GEP STACK HEIGHT (FT)	: 50
UTM VERTICAL	: 0.00 KM	LONGITUDE	: 080:59:20	GEP BUILDING HEIGHT (FT)	: 25
				GEP BUILDING LENGTH (FT)	: 85
STACK TYPE CODE: H - A STACK DISCHARGING IN A HORIZONTAL OR NEARLY HORIZONTAL DI				GEP BUILDING WIDTH (FT)	: 60

POLLUTANT	ESTIMATED UNITS	MEASURED UNITS	METHOD
VOC	205.0000 TY	-	

POLLUTANT	CO DAILY UNITS	OZONE DAILY UNITS	ADJUSTED UNITS
VOC	1650.000 PD	1725.000 PD	

DATE: 01/29/92 — AFS PLANT EMISSIONS INVENTORY — PGM: AFP644
SAMPLE OF AFS AFP644 REPORT — PAGE: 3

PLANT: 9999 - SAMPLE PLANT — YEAR OF EMISSIONS : 1990
STATE: NC/37 CITY: 55000 - RALEIGH — SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
COUNTY: 183 - WAKE CO MSA: - — NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

POINT INFORMATION: 001 E STACK #'S 001

EMISSIONS POINT DESCRIPTION:
USER POINT ID :
CONFIDENTIAL INDICATOR : N
PERCENT THROUGHPUT: DEC-FEB: 33%
MAR-MAY: 27%
JUN-AUG: 15%
SEP-NOV: 25%
BURNER TYPE MAKE : HAUCK MFG
MODEL : 4 - AIR ATOMIZER
INSTALLATION DATE : 88/02/15
CONTROL REGULATION : 990/1990/20000 — SPACE HEAT : 25.0%
DESIGN CAPACITY : 100 MILLION BTU/HOUR HEAT INPUT
OPERATING SCHEDULE:
HOURS PER DAY: 16 — OPERATION START TIME: 0600
DAYS PER WEEK: 5 — OPERATION END TIME : 2200
HOURS PER YEAR: 4000
DRAFT TYPE : 1 - FORCED
DRAFT CONTROL TYPE : 3 - BUTTERFLY
DRAFT CONTROL LOCATION : 4 - OTHER
STATE DATA ELEMENT 2:
3:
4:
5:

POLLUTANT	ESTIMATED	UNITS	STATE DEF'D	UNITS	MEASURED	UNITS	METHOD
NO2	28.14000	TY	28.14000	TY			-
VOC	845.6000	PY	845.6000	PY			-

POLLUTANT	CO DAILY	UNITS	OZONE DAILY	UNITS	ADJUSTED	UNITS	LIMIT	UNITS	LIMIT DESCRIPTION	SIP RULE	YEAR REG	YEAR MOD
NO2	220.0000	PD	260.0000	PD								
VOC	3.000000	PD	4.000000	PD								

POINT SEGMENT INFORMATION: 001 E/01 (STACK 001) - #2 OIL FOR BOILER #1

SOURCE CLASSIFICATION CODE: 10200501 - INDUSTRIAL BOILER - DISTILLATE OIL
- Grades 1 and 2 Oil
ANNUAL FUEL PROCESS RATE : 1400 1000 Gallons Burned — CONFIDENTIAL INDICATOR: N
MAXIMUM OPERATION RATE PER HOUR: 0.715 — MSDS (YR):
PEAK CO SEASON DAILY PROCESS RATE : 5 C - CALCULATED — SDE6 : SDE7 :
PEAK OZONE SEASON DAILY PROCESS RATE: 6 C - CALCULATED
FUEL DATA: SULFUR: 0.300% ASH: 0.00% HEAT CONTENT: 140.00 MMBTU - 1000 Gallons Burned
ASH/SULFUR ORIGIN: ASH/SULFUR SOURCE: SUPPLIER:
TANK DATA:
VAPOR PRESSURE : 0.0000 PSIA
VAPOR MOL. WT. : 0 LB/LB MOLE
PEAK OZONE SEASON VAPOR PRESSURE : 0.0000 PSIA
SOLVENT DATA:
PURCHASED (GAL) : 0
REPROCESSED (GAL): 0
CONTROL EQUIPMENT:
COST ..... : 14000.00
INSTALLATION DATE: 88/05/20

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY; 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

POINT SEGMENT INFORMATION: 001 E/01 (STACK 001) - #2 OIL FOR BOILER #1

POLLUTANT:

NO2 EMISSIONS / UNITS / METHOD EMISSION FACTOR / ORIGIN / SOURCE
ESTIMATED : 14.00000 TY 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C 20.0
OZONE DAILY: 120.0000 PD 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C
CONTROL EQUIPMENT:
PRIMARY : 065 - CATALYTIC REDUCTION EFFICIENCY: 90.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 024 - MODIF. FURNACE/BURNER METHOD: 4 - ENGINEERING ESTIMATE (GUESS)
RULE EFFECTIVENESS: 80% METHOD : D - DEFAULT VALUE (80%) ADJ METHOD: -
SIP RULE IN PLACE : Y YEAR REGULATED: 88 YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

VOC EMISSIONS / UNITS / METHOD EMISSION FACTOR / ORIGIN / SOURCE
ESTIMATED : .1400000 TY 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C 0.2
OZONE DAILY: 1.200000 PD 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C
CONTROL EQUIPMENT:
PRIMARY : 019 - CATALYTIC AFTERBURNER EFFICIENCY: 70.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 000 - NO EQUIPMENT METHOD: 4 - ENGINEERING ESTIMATE (GUESS)
RULE EFFECTIVENESS: 80% METHOD : D - DEFAULT VALUE (80%) ADJ METHOD: -
SIP RULE IN PLACE : Y YEAR REGULATED: 88 YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

POINT SEGMENT INFORMATION: 001 E/02 (STACK 001) - NATURAL GAS FOR BOILER #1

SOURCE CLASSIFICATION CODE: 10200602 - INDUSTRIAL BOILER - NATURAL GAS
- 10-100 MMBtu/Hr
ANNUAL FUEL PROCESS RATE : 202 Million Cubic Feet Burned CONFIDENTIAL INDICATOR: N
MAXIMUM OPERATION RATE PER HOUR: 0.100 MSDS (YR):
PEAK CO SEASON DAILY PROCESS RATE : 1 C - CALCULATED SDE6 : SDE7 :
PEAK OZONE SEASON DAILY PROCESS RATE: 1 C - CALCULATED
FUEL DATA: SULFUR: 0.000% ASH: 0.00% HEAT CONTENT: 1030.00 MMBTU - Million Cubic Feet Burned
ASH/SULFUR ORIGIN: ASH/SULFUR SOURCE: SUPPLIER:
TANK DATA: SOLVENT DATA: CONTROL EQUIPMENT:
VAPOR PRESSURE : 0.0000 PSIA PURCHASED (GAL) : 0 COST ..... : 14000.00
VAPOR MOL. WT. : 0 LB/LB MOLE REPROCESSED (GAL): 0 INSTALLATION DATE: 88/05/20
PEAK OZONE SEASON VAPOR PRESSURE : 0.0000 PSIA

DATE: 01/29/92 | AFS PLANT EMISSIONS INVENTORY | PGM: AFP644
SAMPLE OF AFS AFP644 REPORT | PAGE: 5

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY: 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

POINT SEGMENT INFORMATION: 001 E/02 (STACK 001) - NATURAL GAS FOR BOILER #1

POLLUTANT:

NO2

EMISSIONS / UNITS / METHOD — EMISSION FACTOR / ORIGIN / SOURCE

ESTIMATED : 14.14000 TY 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C 140.0
OZONE DAILY: 140.0000 PD 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C

CONTROL EQUIPMENT:
PRIMARY : 065 - CATALYTIC REDUCTION — EFFICIENCY: 90.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 024 - MODIF. FURNACE/BURNER — METHOD: 4 - ENGINEERING ESTIMATE (GUESS)
RULE EFFECTIVENESS: 80 % METHOD : D - DEFAULT VALUE (80%) — ADJ METHOD: -
SIP RULE IN PLACE : Y YEAR REGULATED: 88 YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

VOC

EMISSIONS / UNITS / METHOD — EMISSION FACTOR / ORIGIN / SOURCE

ESTIMATED : .2828000 TY 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C 2.8
OZONE DAILY: 2.800000 PD 8 - AFS NATIONAL EMISSION FACTOR (COMPUTER-C

CONTROL EQUIPMENT:
PRIMARY : 019 - CATALYTIC AFTERBURNER — EFFICIENCY: 70.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 000 - NO EQUIPMENT — METHOD: 4 - ENGINEERING ESTIMATE (GUESS)
RULE EFFECTIVENESS: 80 % METHOD : D - DEFAULT VALUE (80%) ADJ METHOD: -
SIP RULE IN PLACE : Y YEAR REGULATED: 88 YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

POINT INFORMATION: 002 E

EMISSIONS POINT DESCRIPTION:
USER POINT ID :
CONFIDENTIAL INDICATOR : N
PERCENT THRUPUT: DEC-FEB: 50%
MAR-MAY: 20%
JUN-AUG: 10%
SEP-NOV: 20%
BURNER TYPE MAKE : HAUCK MFG
MODEL : 4 - AIR ATOMIZER
INSTALLATION DATE : 88/02/15

CONTROL REGULATION : 990/1990/2000 SPACE HEAT : 00.0%
DESIGN CAPACITY : 12 THOUSAND BARRELS
OPERATING SCHEDULE:
HOURS PER DAY: 24 OPERATION START TIME: 0600
DAYS PER WEEK: 7 OPERATION END TIME : 2200
HOURS PER YEAR: 8760
DRAFT TYPE : 1 - FORCED
DRAFT CONTROL TYPE : 3 - BUTTERFLY
DRAFT CONTROL LOCATION : 4- OTHER

STATE DATA ELEMENT 2:
3:
4:
5:

DATE: 01/29/92 — AFS PLANT EMISSIONS INVENTORY — PGM: AFP644
SAMPLE OF AFS AFP644 REPORT — PAGE: 6

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY: 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

POINT INFORMATION: 002 E

POLLUTANT	ESTIMATED	UNITS	STATE DEF'D	UNITS	MEASURED	UNITS	METHOD
VOC	282.0000	PY	282.0000	PY			-

POLLUTANT	CO DAILY	UNITS	OZONE DAILY	UNITS	ADJUSTED	UNITS	LIMIT	UNITS	LIMIT DESCRIPTION	SIP RULE	YEAR REG	YEAR MOD
VOC	.4700000	PD	.5800000	PD								

POINT SEGMENT INFORMATION: 002 E/01 (NO STACK)

SOURCE CLASSIFICATION CODE: 40301019 - PETROLEUM PRODUCT STORAGE - FIXED ROOF TANKS (VARYING SIZES)
- DISTILLATE FUEL #2: BREATHING LOSS (67000 BBL. TANK SIZE) FIXED ROOF
ANNUAL FUEL PROCESS RATE : 504 1000 Gallons Storage Capacity — CONFIDENTIAL INDICATOR: N
MAXIMUM OPERATION RATE PER HOUR: 0.000 — MSDS (YR):
PEAK CO SEASON DAILY PROCESS RATE : 1 C - CALCULATED — SDE6 : SDE7 :
PEAK OZONE SEASON DAILY PROCESS RATE: 1 C - CALCULATED
FUEL DATA: SULFUR: 0.000% ASH: 0.00% — HEAT CONTENT: 0.00 MMBTU - 1000 Gallons Storage Capacity
ASH/SULFUR ORIGIN: — ASH/SULFUR SOURCE: — SUPPLIER: ACME FUEL OIL DISTRIBUTORS
TANK DATA: — SOLVENT DATA: — CONTROL EQUIPMENT:
VAPOR PRESSURE : 0.0000 PSIA — PURCHASED (GAL) : 0 — COST ..... : 6500.00
VAPOR MOL. WT. : 130 LB/LB MOLE — REPROCESSED (GAL): 0 — INSTALLATION DATE: 87/11/22
PEAK OZONE SEASON VAPOR PRESSURE : 0.0000 PSIA
POLLUTANT:

VOC
EMISSIONS / UNITS / METHOD — EMISSION FACTOR / ORIGIN / SOURCE
ESTIMATED : .1260000 TY 9 - USER-SUPPLIED EMISSION FACTOR (COMPUTER- .5 LOCAL
OZONE DAILY: .5000000 PD 9 - USER-SUPPLIED EMISSION FACTOR (COMPUTER-
CONTROL EQUIPMENT:
PRIMARY : 047 - VAPOR RECOVERY SYSTEM — EFFICIENCY: 95.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 000 - NO EQUIPMENT — METHOD: 4 - ENGINEERING ESTIMATE (GUESS)
RULE EFFECTIVENESS: % METHOD : - — ADJ METHOD: -

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY: 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

POINT SEGMENT INFORMATION: 002 E/01 (NO STACK)

SIP RULE IN PLACE : N YEAR REGULATED: YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

POINT SEGMENT INFORMATION: 002 E/02 (NO STACK)

SOURCE CLASSIFICATION CODE: 40301021 - PETROLEUM PRODUCT STORAGE - FIXED ROOF TANKS (VARYING SIZES)
- DISTILLATE FUEL #2:WORKING LOSS (TANK DIAMETER INDEPENDENT) FIXED ROOF
ANNUAL FUEL PROCESS RATE : 1500 1000 Gallons Throughput CONFIDENTIAL INDICATOR: N
MAXIMUM OPERATION RATE PER HOUR: 0.715 MSDS (YR):
PEAK CO SEASON DAILY PROCESS RATE : 4 C - CALCULATED SDE6 : SDE7 :
PEAK OZONE SEASON DAILY PROCESS RATE: 4 C - CALCULATED
FUEL DATA: SULFUR: 0.000% ASH: 0.00% HEAT CONTENT: 0.00 MMBTU - 1000 Gallons Throughput
ASH/SULFUR ORIGIN: ASH/SULFUR SOURCE: SUPPLIER:
TANK DATA: SOLVENT DATA: CONTROL EQUIPMENT:
VAPOR PRESSURE : 0.0000 PSIA PURCHASED (GAL) : 0 COST ..... : 6500.00
VAPOR MOL. WT. : 130 LB/LB MOLE REPROCESSED (GAL): 0 INSTALLATION DATE: 87/11/22
PEAK OZONE SEASON VAPOR PRESSURE : 0.0000 PSIA
POLLUTANT:

VOC EMISSIONS / UNITS / METHOD EMISSION FACTOR / ORIGIN / SOURCE
ESTIMATED : .0150000 TY 9 - USER-SUPPLIED EMISSION FACTOR (COMPUTER- .02 LOCAL
OZONE DAILY: .0800000 PD 9 - USER-SUPPLIED EMISSION FACTOR (COMPUTER-
CONTROL EQUIPMENT:
PRIMARY : 047 - VAPOR RECOVERY SYSTEM EFFICIENCY: 95.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 000 - NO EQUIPMENT METHOD: 4 - ENGINEERING ESTIMATE (GUESS)
RULE EFFECTIVENESS: % METHOD : - ADJ METHOD: -
SIP RULE IN PLACE : N YEAR REGULATED: YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

POINT INFORMATION: 003 E STACK #'S 002

EMISSIONS POINT DESCRIPTION:
USER POINT ID :
CONFIDENTIAL INDICATOR : N
CONTROL REGULATION : 990/1990/20000
DESIGN CAPACITY : 5 TONS PER DAY
SPACE HEAT : 00.0%

PLANT: 9999 - SAMPLE PLANT
STATE: NC/37 CITY: 55000 - RALEIGH
COUNTY: 183 - WAKE CO MSA: -

YEAR OF EMISSIONS : 1990
SIP INVENTORY INDICATOR : 03 - CARBON MONOXIDE AND OZONE SIP INVENT
NUMBER OF STACKS: 2 NUMBER OF POINTS: 3 NUMBER OF SEGMENTS: 5

POINT INFORMATION: 003 E STACK #'S 002

PERCENT THRUPUT: DEC-FEB: 22%
MAR-MAY: 28%
JUN-AUG: 28%
SEP-NOV: 22%

OPERATING SCHEDULE:
HOURS PER DAY: 16 OPERATION START TIME: 0600
DAYS PER WEEK: 5 OPERATION END TIME : 2200
HOURS PER YEAR: 4000

STATE DATA ELEMENT 2:
3:
4:
5:

BURNER TYPE MAKE : HAUCK MFG
MODEL : 3 - STEAM ATOMIZER
INSTALLATION DATE : 88/02/15

DRAFT TYPE : 3 - NATURAL
DRAFT CONTROL TYPE : 4 - GUILLOTINE
DRAFT CONTROL LOCATION : 2 - BREECHING

POLLUTANT	ESTIMATED UNITS	STATE DEF'D UNITS	MEASURED UNITS	METHOD
VOC	205.0000 TY	205.0000 TY		-

POLLUTANT	CO DAILY UNITS	OZONE DAILY UNITS	ADJUSTED UNITS	LIMIT	UNITS	LIMIT DESCRIPTION	SIP RULE	YEAR REG	YEAR MOD
VOC	1650.000 PD	1725.000 PD							

POINT SEGMENT INFORMATION: 003 E/01 (STACK 002) - SPRAY PAINTING OF WIDGETS

SOURCE CLASSIFICATION CODE: 40202501 - SURFACE COATING OPERATIONS - MISCELLANEOUS METAL PARTS
- Coating Operation

ANNUAL FUEL PROCESS RATE : 420 Tons Solvent in Coating
MAXIMUM OPERATION RATE PER HOUR: 0.165
PEAK CO SEASON DAILY PROCESS RATE : 2 I - USER INPUT
PEAK OZONE SEASON DAILY PROCESS RATE: 2 I - USER INPUT

CONFIDENTIAL INDICATOR: N
MSDS (YR):
SDE6 : SDE7 :

FUEL DATA: SULFUR: 0.000% ASH: 0.00% HEAT CONTENT: 0.00 MMBTU - Tons Solvent in Coating
ASH/SULFUR ORIGIN: ASH/SULFUR SOURCE: SUPPLIER:

TANK DATA:
VAPOR PRESSURE : 0.0000 PSIA
VAPOR MOL. WT. : 0 LB/LB MOLE
PEAK OZONE SEASON VAPOR PRESSURE : 0.0000 PSIA

SOLVENT DATA:
PURCHASED (GAL) : 0
REPROCESSED (GAL): 0

CONTROL EQUIPMENT:
COST ..... : 4000.00
INSTALLATION DATE: 88/01/10

POLLUTANT:

VOC

EMISSIONS / UNITS / METHOD — EMISSION FACTOR / ORIGIN / SOURCE

ESTIMATED : 205 TY 2 - MATERIAL BALANCE W/ KNOWLEDGE OF PROCESS
OZONE DAILY: 1725 PD 2 - MATERIAL BALANCE W/ KNOWLEDGE OF PROCESS
LIMIT : 1500 PD

CONTROL EQUIPMENT:
PRIMARY : 048 - ACTIVATED CARBON ADSORPTION — EFFICIENCY: 50.000% ADJUSTED EFFICIENCY: 0.000%
SECONDARY: 000 - NO EQUIPMENT — METHOD: 2 - TESTED EFFICIENCY, BASED ON OTHER
RULE EFFECTIVENESS: 80% METHOD : D - DEFAULT VALUE (80%) — ADJ METHOD: -
SIP RULE IN PLACE : Y YEAR REGULATED: 88 YEAR LAST MODIFIED : SEASONAL ADJUSTMENT FACTOR:
TRACE ELEMENT : 0.0000000% METHOD: - SDE8:

APPENDIX G
Part 3

Example Instructions for Revision of the AFP644 Report for Emission Statement Reporting

The AFP644 report provides information on your facility, including emission data at the plant, point, and segment level. The length of your facility's report will vary depending upon the number of points, stacks, and segments and the number of pollutants emitted. Therefore, it is not possible to provide the exact location of the fields to be updated. These instructions will describe the fields that are required for emission statement reporting and provide the exact field name in uppercase text enclosed in quotation marks. [*In addition, the (State or local agency) has highlighted the fields that your facility is required to review*].

If your facility has added new points or segments during the last year, the new information can be provided to the State by requesting the Emission Statement Initial Reporting Form for New and Modified Sources. To request this form contact [*insert appropriate State or local contact and telephone number*].

In order to comply with the [*insert State statute or regulation*] for emission statement reporting, the following information must be reviewed and updated, where appropriate. The same information is required for each point and segment at the facility. Therefore, careful attention should be paid to the point and segment descriptors in the report to ensure that the data are entered correctly for each point and segment. Any changes to the information should be noted directly on the report by striking the old information with one solid line and writing the correct information to the right of the outdated information. In addition, a signed and dated certification of data accuracy must be included with the revised report.

For assistance with calculating your emission statement data, contact [*insert State or local contact*] at [*telephone number*].

I. Plant Level Emission Data

1. Source Identification: The fields to be reviewed are: plant physical location and plant mailing address. The mailing address information is differentiated from the physical location information by the heading "MAILING ADDRESS:". The physical location fields are: "PLANT NAME", "ADDRESS", and "CITY, STATE". The mailing address fields are: "NAME", "ADDRESS", and "CITY, STATE".

2. Calendar year of emissions: Correct the "YEAR OF EMISSIONS" field to reflect the appropriate year of the emissions data.

3. SIC (Standard Industrial Classification) Code: Listed under "STANDARD INDUSTRIAL CLASSIFICATIONS", check that the SIC codes present are consistent with the type of economic activity in which the facility is engaged. SIC codes and their descriptions are listed in the *Standard Industrial Classification Manual*, published by the Office of Management and Budget. Depending upon its operation, your facility may have more than one SIC code; up to three separate codes may be entered.

4. Latitude and Longitude: The locational fields to be reviewed are: "LATITUDE" and "LONGITUDE".

II. Point Level Emission Data

1. Percentage Annual Throughput: Termed "PERCENT THROUGHPUT", The percent of annual throughput achieved in the seasons specified ("DEC-FEB", "MAR-MAY", "JUN-AUG", and "SEP-NOV"). The first season (DEC-FEB) will actually encompass 2 calendar years (e.g., DEC '92 - FEB '93). However, the percentages should not total greater than 100%. Annual throughput can represent the amount of fuel used, the amount of solvent consumed, or the amount of product produced.

2. Normal Operating Schedule: The annual average for the days per week, hours per day, and hours per year that the facility operates. The heading for the data is "OPERATING SCHEDULE:", the field names are: "HOURS PER DAY", "DAYS PER WEEK", and "HOURS PER YEAR".

III. Segment Level Emissions Data

A source classification code (SCC) is an EPA identifier for a specific segment. The SCC is provided by the State and is displayed on the report under the field "SOURCE CLASSIFICATION CODE". The SCC and description are essential information for maintaining your facility's emission data. Each SCC defines a segment at your facility. Be certain that the information you are providing at the segment level is specific to the SCC listed for that segment on the AFP644 report.

1. Annual Process Rate: This number represents the amount of product throughput, the amount of solvent consumed, or the amount of fuel burned. The units for the annual process rate depend upon the specific SCC. When updating the "ANNUAL PROCESS RATE" field, be certain that the units represented by the estimate are the same as noted on the

report.

2. Peak Ozone Season Daily Process Rate: The average daily process rate during the peak ozone season. The ozone season is defined to be the period of the year during which the conditions for the formation of ozone is most favorable. The peak ozone season for the region in which your facility is located is [*insert appropriate peak ozone season*]. The peak ozone season covers a three month period during which most ozone exceedances occur, while the ozone season can extend much longer. The process rate should be determined as above, except averaged to represent a day during the peak ozone season instead of the annual total. The correct reporting units should be determined as outlined above. The information should be entered in the "PEAK OZONE SEASON DAILY PROCESS RATE" field.

3. Pollutant Specific Data: Pollutant specific data are required for the following pollutants: volatile organic compounds (VOC) and oxides of nitrogen (NOx) [*insert additional pollutants, if applicable*]. VOC and NOx have been determined to be significant contributors to the formation of ozone. Therefore, data on the sources of these pollutants are necessary to assist in State air quality planning. [*The additional pollutants are required to coordinate State reporting requirements. By providing data for these pollutants, your facility will avoid duplicating your required emission reporting efforts.*] The same data are required for each of the pollutants. The pollutant data are provided under the heading "POLLUTANT". The field for NO_x emissions on the AFP644 report is marked "NO_2", however, NO_x emissions (which include both NO and NO_2) are the emissions that need to be entered.

3A. Estimated Actual Annual Emissions: Actual emissions should represent the actual emissions for the source for the calendar year, including upsets, downtime, and fugitive emissions. Emissions from significant and minor processes within the plant must be part of the emissions estimate. When VOC emission estimates are determined, methane, ethane and chloroflourocarbons are not included in the estimate because these compounds are considered to be photochemically nonreactive. Units must be in tons of pollutant emitted per year. The estimated actual annual emissions should be entered in the "ESTIMATED" field for each of the pollutants listed, in the "EMISSIONS" column. The "UNITS" column should be checked to make sure that it accurately denotes tons per year (TY). Actual emissions can be derived in a number of ways. Emissions can be estimated based upon any of the EPA's acceptable methods as detailed by the following emissions method codes.

Estimated Emissions Method Code: This code denotes the method used to calculate your facility's estimated actual annual emissions. The correct method code should be noted in the "ESTIMATED" field's "METHOD" column. Valid codes are as follows:

1 - USER CALCULATED BASED ON SOURCE TEST OR OTHER EMISSION MEASUREMENTS.
2 - USER CALCULATED BASED ON MATERIAL BALANCE USING ENGINEERING KNOWLEDGE OF THE PROCESS.
3 - USER CALCULATED BASED ON AP-42 EMISSION FACTOR (OR SCC EMISSION FACTOR).
4 - USER CALCULATED BY BEST ENGINEERING JUDGEMENT
5 - USER CALCULATED BASED ON A STATE OR LOCAL AGENCY EMISSION FACTOR.
6 - NEW CONSTRUCTION, NOT YET OPERATIONAL. EMISSIONS ARE ZERO.
7 - SOURCE CLOSED; OPERATION CEASED. EMISSIONS ARE ZERO
8 - COMPUTER CALCULATED BASED ON STANDARD EMISSION FACTOR. (SCC EMISSION FACTOR FILE)
9 - COMPUTER CALCULATED BASED ON OTHER APPROVED EMISSION FACTOR.

All emissions calculated by a facility will be denoted by codes 1 through 5. Codes 8 and 9 represent emissions that were calculated by the EPA's data base system.

Emission Factor: The emission factor used to compute the estimated annual emissions. If an emission factor was used in the computation, it should be entered in the "ESTIMATED" field's "EMISSION FACTOR" column. In the event that emission factors are utilized in the calculation of emissions, a source must use emission factors that are approved by EPA or the State. Otherwise, the source must petition the State for approval of their emission factors.

3B. Typical Ozone Season Day Emissions: These emissions must be supplied in pounds per day and must represent actual emissions during the peak ozone season. As mentioned under estimated actual annual emissions, when estimating VOC emissions, methane, ethane, and chloroflourocarbons are not to be included in the estimation. To calculate the typical ozone season day emissions, the throughput for a typical ozone season day must be determined. The peak ozone season for the region in which your facility is located is [*insert peak ozone season*]. The throughput should be determined as previously discussed. Actual emissions can be derived in a number of ways. Acceptable EPA methods are the same as those listed above. Estimates must account for both significant and minor process emissions, and fugitive emissions should also be included in the emissions report if applicable. The typical ozone season day emissions should

be entered in the "OZONE DAILY" field's "EMISSIONS" column. Also, the "UNITS" column should be checked to ensure that it correctly reflects pounds per day (PD).

Estimated Emissions Method Code: The emission method codes are identical to the method codes presented in 3A. The typical ozone season day emission method code should be entered in the "OZONE DAILY" field's "METHOD" column.

Emission Factor: The EPA or State approved emission factor used to compute the typical ozone season day emission estimate. If an emission factor was used in the computation, it should be entered in the "OZONE DAILY" field's "EMISSION FACTOR" column.

3C. Control Equipment Identification Code: Control equipment is used to limit the emission of pollutants to the atmosphere. Numerous types of control equipment may be in place at a facility. For emission statement reporting, your facility is required to report the primary and secondary control equipment codes. The following list details the control equipment codes for different control equipment. For more information on the correct code for the control equipment at your facility, contact [*insert appropriate State or local contact and telephone number*]. The control equipment information should be entered under the "CONTROL EQUIPMENT:" heading, in the "PRIMARY" and "SECONDARY" fields. Valid codes are as follows:

000 - NO EQUIPMENT
001 - WET SCRUBBER HIGH EFFICIEN.
002 - WET SCRUBBER MED EFFICIEN.
003 - WET SCRUBBER LOW EFFICIEN.
004 - GRAVITY COLL HIGH EFFICIEN.
005 - GRAVITY COLL MED EFFICIEN.
006 - GRAVITY COLL LOW EFFICIEN.
007 - CENTRIF COLL HIGH EFFICIEN.
008 - CENTRIF COLL MED EFFICIEN.
009 - CENTRIF COLL LOW EFFICIEN.
010 - ELECTRO PREC HIGH EFFICIEN.
011 - ELECTRO PREC MED EFFICIEN.
012 - ELECTRO PREC LOW EFFICIEN.
013 - GAS SCRUBBER, GENERAL
014 - MIST ELIMINATOR HIGH VELOC.
015 - MIST ELIMINATOR LOW VELOC.
016 - FABRIC FILTER HIGH TEMP.
017 - FABRIC FILTER MEDIUM TEMP.
018 - FABRIC FILTER LOW TEMP.
019 - CATALYTIC AFTERBURNER
020 - CAT. AFTERBURN - HEAT EXCH.
021 - DIRECT FLAME AFTERBURN
022 - D.F. AFTERBURN - HEAT EXCH.
023 - FLARING
024 - MODIF FURNACE/BURNER DESIGN
025 - STAGED COMBUSTION
026 - FLUE GAS RECIRCULATION
027 - REDUC COMBUST.- PREHEAT
028 - STEAM OR WATER INJECTION
029 - LOW-EXCESS - AIR FIRING
030 - FUEL - LOW NITROGEN CONTENT
031 - AIR INJECTION
032 - AMMONIA INJECTION
033 - CONTRL OF % O2 IN COMB.AIR
034 - WELL.-LORD/SODIUM SULF SCRB
035 - MAGNESIUM OXIDE SCRUBBING
036 - DUAL ALKALI SCRUBBING
037 - CITRATE PROCESS SCRUBBING
038 - AMMONIA SCRUBBING
039 - CATAL. OXID-FLUE GAS DESULF
040 - ALKALIZED ALUMINA
041 - DRY LIMESTONE INJECTION
042 - WET LIMESTONE INJECTION
043 - SULF ACID PLNT-CONTACT PROC
044 - SULF ACID PLNT-DBL CNT PROC
045 - SULFUR PLANT
046 - PROCESS CHANGE
047 - VAPOR RECOVERY SYSTEM
048 - ACTIVATED CARBON ADSORPTION
049 - LIQUID FILTRATION SYSTEM
050 - PACKED-GAS ABSORBION COLUMN
051 - TRAY-TYPE GAS ABSORB COLUMN
052 - SPRAY TOWER
053 - VENTURI SCRUBBER
054 - PROCESS ENCLOSED
084 - ACTIVATED CLAY ADSORPTION

3C. Control Equipment Identification Code: (cont.)

054 - PROCESS ENCLOSED
055 - IMPINGEMENT PLATE SCRUBBER
056 - DYNAMIC SEPARATOR (DRY)
057 - DYNAMIC SEPARATOR (WET)
058 - MAT OR PANEL FILTER
059 - METAL FABRIC FILTER SCREEN
060 - PROCESS GAS RECOVERY
061 - DUST SUPPRESS - WATER SPRAY
062 - D.S.- CHEM STAB./WET AGENTS
063 - GRAVEL BED FILTER
064 - ANNULAR RING FILTER
065 - CATALYTIC REDUCTION
066 - MOLECULAR SIEVE
067 - WET LIME SLURRY SCRUBBING
068 - ALKALINE FLY ASH SCRUBBING
069 - SODIUM CARBONATE SCRUBBING
070 - SODIUM-ALKALI SCRUBBING
071 - FLUID BED DRY SCRUBBER
072 - TUBE AND SHELL CONDENSER
073 - REFRIGERATED CONDENSER
074 - BAROMETRIC CONDENSER
075 - SINGLE CYCLONE
076 - MULTIPLE CYCLONE W/O FLY ASH REINJECTION
078 - BAFFLE
079 - MULTIPLE CYCLONE W/ FLY ASH REINJECTION
080 - CHEMICAL OXIDATION
081 - CHEMICAL REDUCTION
082 - OZONATION
083 - CHEMICAL NEUTRALIZATION
084 - ACTIVATED CLAY ADSORPTION
085 - WET CYCLONIC SEPARATOR
086 - WATER CURTAIN
087 - NITROGEN BLANKET
088 - CONSERVATION VENT
089 - BOTTOM FILLING
090 - CONVERSION TO VARIABLE VAPOR SPACE TANK
091 - CONVERSION TO FLOATING ROOF TANK
092 - CONVERSION TO PRESSURIZED TANK
093 - SUBMERGED FILLING
094 - UNDERGROUND TANK
095 - WHITE PAINT
096 - VAPOR LOCK BALANCE RECOVERY SYSTEM
097 - INSTALLATION OF SECONDARY SEAL FOR EXTERNAL FLOATING ROOF TANK
098 - MOVING BED DRY SCRUBBER
099 - MISCELLANEOUS CONTROL DEVICES
101 - HIGH EFFICIENCY PARTICULATE AIR FILTER

3D. Control Equipment Efficiency: The percent effectiveness of the control device(s). It represents the actual total control efficiency achieved by the control device(s). The actual efficiency should reflect control equipment downtime and maintenance degradation. If the actual control efficiency is unavailable, the design efficiency or control efficiency limit imposed by a permit should be used. The control equipment efficiency should be entered in the "EFFICIENCY" field.

In addition, the capture efficiency must be taken into account when determining control efficiency. Capture efficiency is a measure of the volume of pollutant captured or recovered relative to the volume of pollutant generated. The entire emission stream may not always pass through the control equipment. A certain percentage of emissions may escape as fugitive emissions and are therefore not controlled, and the calculated emissions must reflect this.

APPENDIX H

Emission Statement Reporting Package for Nontraditional Sources

Appendix H is composed of 3 parts: an explanatory letter, an example Emission Statement Initial Reporting Form, and example instructions. These 3 elements complete the package of information necessary for States to supply to nontraditional sources for emission statement reporting.

APPENDIX H
Part 1

Example State Letter to Nontraditional Sources

Date
Owner/Operator
Fresh Coat Paint, Inc.
123 Main St.
City, State 99999

Dear Owner/operator:

Under the 1990 Clean Air Act Amendments (CAAA), States are required to revise their State Implementation Plans to include the requirement that certain firms submit annual stationary source emission statements to the State in which they operate. Emission statements will provide the State with an estimate of a source's emissions, and are required from all sources in ozone nonattainment areas emitting [*insert State cutoff, if applicable*] nitrogen oxides (NO_x) or volatile organic compounds (VOC). The requirement also applies to sources in attainment areas within ozone transport regions which emit or have the potential to emit 50 tons per year or more of VOC or 100 tpy or more of NO_x.

Based upon [*cite State statute or regulations*] your firm is required to submit an emission statement. The first emission statement from your firm must be submitted to [*insert name of appropriate State or local agency*] by [*April 15 or whatever date is required by the State*]. The emission estimates must represent the actual annual emissions of NO_x and VOC for calendar year 1992. The emission estimate must include an estimate of emissions from normal operations as well as any emissions that may have resulted from malfunctions.

Emissions data for your firm are not yet on file with the EPA. Therefore, completion of the enclosed Emission Statement Initial Reporting Form is required. The emission statement reporting form, when complete, will contain all of the information necessary to comply with the State's emission statement requirement.

Instructions regarding the information required in the Emission Statement Initial Reporting Form are also provided.

Submission of the Emission Statement Initial Reporting Form is required to enter your facility's emissions data into EPA's Aerometric Information Retrieval System (AIRS) database. Once your emissions data are on file with the EPA, the annual emission statement requirement will be met by updating your firm's previous year's emissions data. The data will be obtained by the State from EPA and sent annually to your firm for review and/or correction.

A certification of data accuracy must be included with your firm's emission statement. The certification of data accuracy must state that all information being submitted is complete, true, and accurate to the best knowledge of the certifying individual. The certifying individual is defined to be an official of the company who will take legal responsibility for the emission statement's accuracy. The certifying individual's signature on the certification of data accuracy is essential for the completeness of the emission statement. No emission statement will be accepted without a signed statement.

Failure to comply with the emission statement requirement may result in a civil action, a civil penalty, or both. State sanctions for noncompliance include [*insert sanctions*].

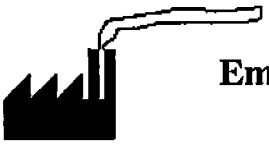
Questions about the new CAAA emission statement requirement and emission reporting should be directed to [*the appropriate contact at the State*]. This contact can be reached at: [*insert phone number*].

Sincerely,

Jane Smith
Director of Air Quality

APPENDIX H
Part 2

Example Emission Statement Initial Reporting Form



Emission Statement Initial Reporting Form for New and Modified Sources

I. Plant Level Emission Data

*** For State Use Only**

AIRS code: [ ][ ] – [ ][ ][ ] – [ ][ ][ ][ ]
State County Plant

1. **Source Identification** _____

Facility Name (up to 40 characters)

_____

Facility Address (up to 30 characters)

_____

Mailing Address (up to 30 characters)

2. **Calendar Year of Emissions** [ ][ ]

3. **SIC code(s)** [ ][ ][ ][ ] [ ][ ][ ][ ] [ ][ ][ ][ ]

4. **Locational Coordinates**

Latitude [ ][ ] – [ ][ ][ ] – [ ][ ]

Longitude [ ][ ][ ] – [ ][ ][ ] – [ ][ ]

Above data elements all appear on AIRS update screen no. 300

Emission Statement Initial Reporting Form for New and Modified Sources

II. Point Level Emission Data

*** For State Use Only**

Point No. ☐☐☐

(AIRS update screen no. 330)

1. Percentage Annual Throughput:

(AIRS update screen no. 330)

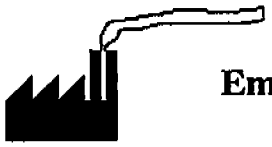
Dec - Feb:	☐	**%**
Mar - May:	☐	**%**
Jun - Aug:	☐	**%**
Sep - Nov:	☐	**%**
	100%	

2. Normal Operating Schedule

(AIRS update screen no. 330)

Days per Week ☐

Hours per Day ☐☐ **Hours per Year** ☐☐☐☐



Emission Statement Initial Reporting Form for New and Modified Sources

III. Segment Level Emission Data

*** For State Use Only**

SCC ☐☐–☐☐–☐☐☐–☐☐ SCC Description _____

(AIRS update screen no. 340) *(no AIRS update required)*

Point No. ☐☐☐ Rule Effectiveness for VOC ☐☐ % VOC Rule Effectiveness % Method Code ☐

(AIRS update screen no. 340)

Segment No. ☐☐ Rule Effectiveness for NOx ☐☐ % NOx Rule Effectiveness % Method Code ☐

(AIRS update screen no. 340) *(AIRS update screen no. 341)*

1. Annual Process Rate ☐☐☐☐☐☐☐ _____

(AIRS update screen no. 340) units

2. Peak Ozone Season Daily Process Rate ☐☐☐☐☐☐☐ _____

(AIRS update screen no. 340) units

3. Pollutant-specific Data

(AIRS update screen no. 341)

VOC

A. Estimated Actual Annual Emissions

☐☐☐☐☐☐☐ Tons per Year

Emissions Method Code ☐ Emission Factor _____ ____ unit

B. Typical Ozone Season Day Emissions

☐☐☐☐☐☐☐ Pounds per Day

Emissions Method Code ☐ Emission Factor _____ ____ unit

C. Control Equipment Identification Code

☐☐☐ Primary ☐☐☐ Secondary

D. Control Equipment Efficiency (%)

☐☐.☐☐☐ %

NOx

A. Estimated Actual Annual Emissions

☐☐☐☐☐☐☐ Tons per Year

Emissions Method Code ☐ Emission Factor _____ ____ unit

B. Typical Ozone Season Day Emissions

☐☐☐☐☐☐☐ Pounds per Day

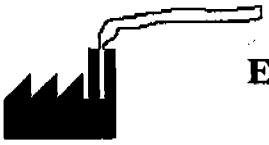
Emissions Method Code ☐ Emission Factor _____ ____ unit

C. Control Equipment Identification Code

☐☐☐ Primary ☐☐☐ Secondary

D. Control Equipment Efficiency (%)

☐☐.☐☐☐ %



Emission Statement Initial Reporting Form for New and Modified Sources

III. Segment Level Emission Data

*** For State Use Only**

SCC ☐☐–☐☐☐–☐☐☐–☐☐ SCC Description _____ *(no AIRS update required)*

(AIRS update screen no. 340)

Point No. ☐☐☐ *(AIRS update screen no. 340)*

Segment No. ☐☐ *(AIRS update screen no. 340)*

Rule Effectiveness for _____ (pollutant) ☐☐ % Rule Effectiveness Percent Method Code ☐

Rule Effectiveness for _____ (pollutant) ☐☐ % Rule Effectiveness Percent Method Code ☐ *(AIRS update screen no. 341)*

Pollutant-specific Data *(AIRS update screen no. 341)*

Pollutant _____

A. Estimated Actual Annual Emissions

☐☐☐☐☐☐☐ Tons per Year

Emissions Method Code ☐ Emission Factor _____ _____ unit

B. Typical Ozone Season Day Emissions

☐☐☐☐☐☐☐ Pounds per Day

Emissions Method Code ☐ Emission Factor _____ _____ unit

C. Control Equipment Identification Code

☐☐☐ Primary ☐☐☐ Secondary

D. Control Equipment Efficiency (%)

☐☐.☐☐☐ %

Pollutant _____

A. Estimated Actual Annual Emissions

☐☐☐☐☐☐☐ Tons per Year

Emissions Method Code ☐ Emission Factor _____ _____ unit

B. Typical Ozone Season Day Emissions

☐☐☐☐☐☐☐ Pounds per Day

Emissions Method Code ☐ Emission Factor _____ _____ unit

C. Control Equipment Identification Code

☐☐☐ Primary ☐☐☐ Secondary

D. Control Equipment Efficiency (%)

☐☐.☐☐☐ %

APPENDIX H
Part 3

Example Instructions for Completion of the Emission Statement Initial Reporting Form

This emission statement reporting form has been tailored to meet the needs of your facility. Through coordination with [*insert State or local agency*], it has been determined that your facility consists of [#] points and [#] segments. As such, the enclosed form consists of one plant page, [#] point pages and [#] segment pages.

In order to comply with the [*insert State statute or regulation*] for emission statement reporting, all of the pages must be completed and returned to [*insert State or local agency*]. In addition, a signed and dated certification of data accuracy must be included with the completed form.

The following text will instruct you how to accurately complete the emission statement initial reporting form. Please review the instructions carefully. Any questions should be forwarded to [*insert State contact and telephone number*].

An example surface coating facility is used throughout these instructions to help clarify some of the specific data requirements. The example surface coating plant uses two types of coatings and consists of one point and two segments.

I. Plant Level Emission Data

The shaded area is for [*insert State or local agency*] use only.

1. Source Identification: The complete facility name, physical location (facility address), and mailing address.

2. Calendar year of emissions: Two digits representing the calendar year for which the emissions data are applicable (e.g., 91 for 1991 emissions).

3. SIC (Standard Industrial Classification) Code: The SIC code is a four digit code which classifies sources according to economic activity. SIC codes and their descriptions are listed in the *Standard Industrial Classification Manual*, published by the Office of Management and Budget. Depending upon its operation, a facility may have more than one SIC code; up to three separate codes may be entered.

4. Latitude and Longitude: Your facility must supply latitude and longitude in accordance with EPA's Locational Data Policy.

II. Point Level Emission Data

The shaded area is for [*insert State or local agency*] use only.

1. Percentage Annual Throughput: The percent of annual throughput achieved in the seasons specified (DEC-FEB, MAR-MAY, JUN-AUG, and SEP-NOV). The first season (DEC-FEB) will actually encompass 2 calendar years (e.g., DEC '92 - FEB '93). However, the percentages should not total greater than 100%. Annual throughput can represent the amount of fuel used, the amount of solvent consumed, or the amount of product produced.

   The example surface coating plant applies 110,000 pounds of coating annually: 25,000 pounds in December - February, 35,000 pounds in March - May, 20,000 tons in June - August, and the remaining 30,000 tons in September - November. To determine the percentage annual throughput, the amount of coating applied during each season would be divided by the total amount of coating applied. The resulting percentage annual throughput in this example would be: 23% December - February, 32% March - May, 18% June - August, and 27% September - November.

2. Normal Operating Schedule: The annual average of the days per week, hours per day, and hours per year that the facility operates.

III. Segment Level Emissions Data

The shaded area is for [*insert State or local agency*] use only. A source classification code (SCC) is an EPA identifier for a specific segment. The SCC and its description are provided by the State and are displayed in the shaded box at the top of the segment form.

The example surface coating plant uses two types of coatings and as such has two SCCs. For coating number 1, a solvent based paint, the SCC is 4-02-001-01. For coating number 2, an enamel, the SCC is 4-02-005-01. Data concerning each SCC should be provided on separate segment level forms.

1. Annual Process Rate: This number represents the amount of product throughput, the amount of solvent consumed, or the amount of fuel burned. The units for the annual process rate depend upon the specific SCC. The appropriate units for reporting the annual process rate can be determined by using the SCC and referencing the EPA publication *AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants*, or by contacting

[*insert State/local contact and telephone number*].

To determine the annual process rate, the example surface coating facility should determine the amount of coating number 1 applied. The facility does not process fuel, but does throughput 110,000 pounds of coating annually. Of the 110,000 pounds, 70,000 pounds of coating are applied as a solvent based paint, coating number 1. The SCC for coating number 1, as provided by the State, is 4-02-001-01. By referencing the above named document, or by contacting the State, the appropriate units are determined to be "tons of coating mix applied". Since the amount of coating applied is known by the facility, the annual process rate may be reported as 70,000/2,000, or 35 tons of coating applied. Alternatively, the source may choose to compute an annual process rate based on the gallons of coating applied, which is listed under a separate SCC.

A similar process would be used to compute the annual process rate for coating number 2. The data would be reported on the second segment level emission data form, and would correspond to the State provided SCC for coating number 2.

2. Peak Ozone Season Daily Process Rate: The average daily process rate during the peak ozone season. The ozone season is defined to be the period of the year during which the conditions for the formation of ozone is most favorable. The peak ozone season for the region in which your facility is located is [*insert appropriate peak ozone season*]. The peak ozone season covers a three month period during which most ozone exceedances occur, while the ozone season can extend much longer. The process rate should be determined as above, except averaged to represent a day during the peak ozone season instead of the annual total. The correct reporting units should be determined as outlined above.

3. Pollutant Specific Data: Pollutant specific data are required for the following pollutants: volatile organic compounds (VOC) and oxides of nitrogen (NOx) [*insert additional pollutants, if applicable*]. VOC and NOx have been determined to be significant contributors to the formation of ozone. Therefore, data on the sources of these pollutants are necessary to assist in State air quality planning. [*The additional pollutants are required to coordinate State reporting requirements. By providing data for these pollutants, your facility will avoid duplicating your required emission reporting efforts.*] The same data are required for each of the pollutants.

3A. Estimated Actual Annual Emissions: Actual annual emissions should represent the actual emissions for the source for the

calendar year, including upsets, downtime, and fugitive emissions. Emissions from significant and minor processes within the plant must be part of the emissions estimate. When estimating annual VOC emissions, it is necessary to exclude methane, ethane and chloroflourocarbons from the estimation because they are considered to be photochemically nonreactive. Units must be in tons of pollutant emitted per year. Actual emissions can be derived in a number of ways. Emissions can be estimated based upon any of the EPA's acceptable methods as detailed by the following emission method codes.

The example surface coating facility has decided to use an emission factor to estimate their emissions. An emission factor is a number that, when multiplied by the appropriate process data (such as tons of coating mix applied), will yield the facility's estimated actual annual emissions. By using the EPA document, *AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants*, the facility has determined that for SCC 4-02-001-01 (coating number 1), the emission factor is 1120 pounds of VOC per ton of coating mix applied. As previously determined, 35 tons of coating were applied as coating number 1, therefore the amount of VOC emissions from coating number 1 is 35 X 1120, or 39,200 pounds per year. To achieve the required tons per year figure, 39,000 is divided by 2,000, resulting in estimated actual annual emissions of 19.6 tons per year. This figure should then be entered on the segment level emission data form corresponding to SCC 4-02-001-01. The same procedure should be followed, using emission factors for the second coating, to determine the emissions for coating number 2 (i.e., SCC 4-02-005-01), which is then entered on the second segment level emission data form and for all other pollutants.

Estimated Emissions Method Code: This code denotes the method used to calculate your facility's emissions. Valid codes are as follows:

1 - USER CALCULATED BASED ON SOURCE TEST OR OTHER EMISSION MEASUREMENTS.
2 - USER CALCULATED BASED ON MATERIAL BALANCE USING ENGINEERING KNOWLEDGE OF THE PROCESS.
3 - USER CALCULATED BASED ON AP-42 EMISSION FACTOR (OR SCC EMISSION FACTOR).
4 - USER CALCULATED BY BEST ENGINEERING JUDGEMENT
5 - USER CALCULATED BASED ON A STATE OR LOCAL AGENCY EMISSION FACTOR.
6 - NEW CONSTRUCTION, NOT YET OPERATIONAL. EMISSIONS ARE ZERO.
7 - SOURCE CLOSED; OPERATION CEASED. EMISSIONS ARE ZERO
8 - COMPUTER CALCULATED BASED ON STANDARD EMISSION FACTOR.

(SCC EMISSION FACTOR FILE)
9 - COMPUTER CALCULATED BASED ON OTHER APPROVED EMISSION FACTOR.

All emissions calculated by a facility will be denoted by codes 1 through 5. Codes 8 and 9 represent emissions that were calculated by the EPA's data base system.

The example surface coating facility used an emission factor from the *AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants.* Therefore, the emission method code entered by the example facility is 3.

Emission Factor: The emission factor used to compute the estimated annual emissions. If an emission factor was used in the computation, it should be entered in the space provided. The emission factor should include the appropriate units (e.g., pounds of pollutant per ton of coating applied). Up to 7 characters can be used to indicate the emission factor. In the event that emission factors are utilized in the calculation of emissions, a source must use emission factors that are approved by EPA or the State. Otherwise, the source must petition the State for approval of their emission factors.

The example facility's emission factor for coating number 1, SCC 4-02-001-01, is 1120 lbs VOC/ton of coating mix applied. Again, this emission factor was derived by examining the AIRS SCC manual for the appropriate SCC, in this case 4-02-001-01, and the correct pollutant, VOC. The emission factor for coating number 2, SCC 4-02-005-01, is found to be 840 lbs VOC/ton of coating mix applied.

3B. Typical Ozone Season Day Emissions: These emissions must be supplied in pounds per day and must represent actual emissions during the peak ozone season. As mentioned under estimated actual annual emissions, when estimating VOC emissions, methane, ethane, and chloroflourocarbons are not to be included in the estimation. To calculate the typical ozone season day emissions, the throughput for a typical ozone season day must be determined. The peak ozone season for the region in which your facility is located is [*insert peak ozone season*]. The throughput should be determined as previously discussed. Actual emissions can be derived in a number of ways. Acceptable EPA methods are the same as those listed above. Estimates should account for both significant and minor process emissions, and fugitive emissions should also be included in the emissions reported if applicable.

The example surface coating facility has decided to use an

emission factor to compute their typical ozone season day emissions. The peak ozone season for their region has been supplied by the State and the source has determined that on an average day during the peak ozone season, they apply approximately 165 pounds of coating. Using the emission factor for SCC 4-02-001-01 (coating number 1) they have determined that 1120 pounds of VOC are emitted for every ton of coating number 1 applied. To calculate the daily emissions, the tons per day of coating applied during the ozone season is determined and multiplied by the emission factor of 1120. The resulting daily emissions are: 165/2,000 = .0825 tons per day X 1120 pounds of VOC per ton = 92.4 pounds of VOC. The same process is repeated for coating number 2 (and for any other pollutants).

Estimated Emissions Method Code: The emission method codes are identical to the method codes presented in 3A.

Once again, the example source would enter 3 for the estimated emissions method code.

Emission Factor: The EPA or State approved emission factor used to compute the typical ozone season day emission estimate. If an emission factor was used in the computation, it should be entered in the space provided. The emission factor should include the appropriate units (e.g., pounds of pollutant per ton of coating applied). Up to 7 characters can be used to indicate the emission factor.

3C. Control Equipment Identification Code: Control equipment is used to limit the emission of pollutants to the atmosphere. Numerous types of control equipment may be in place at a facility. For emission statement reporting, your facility is required to report the primary and secondary control equipment codes. The following list details the control equipment codes for different control equipment. For more information on the correct code for the control equipment at your facility, contact [*insert appropriate State or local contact and telephone number*]. Valid codes are as follows:

000 - NO EQUIPMENT
001 - WET SCRUBBER HIGH EFFICIEN.
002 - WET SCRUBBER MED EFFICIEN.
003 - WET SCRUBBER LOW EFFICIEN.
004 - GRAVITY COLL HIGH EFFICIEN.
005 - GRAVITY COLL MED EFFICIEN.
006 - GRAVITY COLL LOW EFFICIEN.
007 - CENTRIF COLL HIGH EFFICIEN.
008 - CENTRIF COLL MED EFFICIEN.
009 - CENTRIF COLL LOW EFFICIEN.
010 - ELECTRO PREC HIGH EFFICIEN.
011 - ELECTRO PREC MED EFFICIEN.
012 - ELECTRO PREC LOW EFFICIEN.
013 - GAS SCRUBBER, GENERAL
014 - MIST ELIMINATOR HIGH VELOC.
015 - MIST ELIMINATOR LOW VELOC.
016 - FABRIC FILTER HIGH TEMP.
017 - FABRIC FILTER MEDIUM TEMP.
018 - FABRIC FILTER LOW TEMP.
019 - CATALYTIC AFTERBURNER
020 - CAT. AFTERBURN - HEAT EXCH.
021 - DIRECT FLAME AFTERBURN
022 - D.F. AFTERBURN - HEAT EXCH.
023 - FLARING
024 - MODIF FURNACE/BURNER DESIGN
025 - STAGED COMBUSTION
026 - FLUE GAS RECIRCULATION
027 - REDUC COMBUST.- PREHEAT
028 - STEAM OR WATER INJECTION
029 - LOW-EXCESS - AIR FIRING
030 - FUEL - LOW NITROGEN CONTENT
031 - AIR INJECTION
032 - AMMONIA INJECTION
033 - CONTRL OF % O2 IN COMB.AIR
034 - WELL.-LORD/SODIUM SULF SCRB
035 - MAGNESIUM OXIDE SCRUBBING
036 - DUAL ALKALI SCRUBBING
037 - CITRATE PROCESS SCRUBBING
038 - AMMONIA SCRUBBING
039 - CATAL. OXID-FLUE GAS DESULF
040 - ALKALIZED ALUMINA
041 - DRY LIMESTONE INJECTION
042 - WET LIMESTONE INJECTION
043 - SULF ACID PLNT-CONTACT PROC
044 - SULF ACID PLNT-DBL CNT PROC
045 - SULFUR PLANT
046 - PROCESS CHANGE
047 - VAPOR RECOVERY SYSTEM
048 - ACTIVATED CARBON ADSORPTION
049 - LIQUID FILTRATION SYSTEM
050 - PACKED-GAS ABSORBION COLUMN
051 - TRAY-TYPE GAS ABSORB COLUMN
052 - SPRAY TOWER
053 - VENTURI SCRUBBER

3C. Control Equipment Identification Code: (cont.)

054 - PROCESS ENCLOSED
055 - IMPINGEMENT PLATE SCRUBBER
056 - DYNAMIC SEPARATOR (DRY)
057 - DYNAMIC SEPARATOR (WET)
058 - MAT OR PANEL FILTER
059 - METAL FABRIC FILTER SCREEN
060 - PROCESS GAS RECOVERY
061 - DUST SUPPRESS - WATER SPRAY
062 - D.S.- CHEM STAB./WET AGENTS
063 - GRAVEL BED FILTER
064 - ANNULAR RING FILTER
065 - CATALYTIC REDUCTION
066 - MOLECULAR SIEVE
067 - WET LIME SLURRY SCRUBBING
068 - ALKALINE FLY ASH SCRUBBING
069 - SODIUM CARBONATE SCRUBBING
070 - SODIUM-ALKALI SCRUBBING
071 - FLUID BED DRY SCRUBBER
072 - TUBE AND SHELL CONDENSER
073 - REFRIGERATED CONDENSER
074 - BAROMETRIC CONDENSER
075 - SINGLE CYCLONE
076 - MULTIPLE CYCLONE W/O FLY ASH REINJECTION
078 - BAFFLE
079 - MULTIPLE CYCLONE W/ FLY ASH REINJECTION
080 - CHEMICAL OXIDATION
081 - CHEMICAL REDUCTION
082 - OZONATION
083 - CHEMICAL NEUTRALIZATION
084 - ACTIVATED CLAY ADSORPTION
085 - WET CYCLONIC SEPARATOR
086 - WATER CURTAIN
087 - NITROGEN BLANKET
088 - CONSERVATION VENT
089 - BOTTOM FILLING
090 - CONVERSION TO VARIABLE VAPOR SPACE TANK
091 - CONVERSION TO FLOATING ROOF TANK
092 - CONVERSION TO PRESSURIZED TANK
093 - SUBMERGED FILLING
094 - UNDERGROUND TANK
095 - WHITE PAINT
096 - VAPOR LOCK BALANCE RECOVERY SYSTEM
097 - INSTALLATION OF SECONDARY SEAL FOR EXTERNAL FLOATING ROOF TANK
098 - MOVING BED DRY SCRUBBER
099 - MISCELLANEOUS CONTROL DEVICES
101 - HIGH EFFICIENCY PARTICULATE AIR FILTER

The example surface coating facility's primary control device is a vapor recovery system. The facility has no secondary control device. Therefore, the facility should enter 047 for the primary control device and 000 for the secondary control device.

3D. Control Equipment Efficiency: The percent effectiveness of the control device(s). It represents the actual total control efficiency achieved by the control device(s). The actual efficiency should reflect control equipment downtime and maintenance degradation. If the actual control efficiency is unavailable, the design efficiency or control efficiency limit imposed by a permit should be used.

In addition, the capture efficiency must be taken into account when determining control efficiency. Capture efficiency is a measure of the volume of pollutant captured

or recovered relative to the volume of pollutant generated. The entire emission stream may not always pass through the control equipment. A certain percentage of emissions may escape as fugitive emissions and are therefore not controlled, and the calculated emissions must reflect this.

APPENDIX I

EPA FACILITY ID CODE

The Facility Identification Data Standard (FIDS) became effective on April 9, 1990, after formal Agency-wide review, when it became EPA Order #2180.3. The objective of the FIDS is to unify facility data maintained by different EPA programs. The FIDS institutes the assignment of a unique identifier to facilities regulated under Federal environmental laws. In addition, this "EPA facility identification code" is to be part of every data collection, whether manual or automated, containing information on that facility. The FIDS will improve the compatibility of all Agency facility data by providing a fundamental piece of "linkable" information, the EPA facility ID code, to all facility-oriented data, allowing integration across systems and data from different sources. Assignment of EPA facility ID codes will be done using the Facility INDex System (FINDS), an EPA data base containing an inventory of facilities to which ID codes have been assigned.

EPA Headquarters media program staff (i.e., those staff within programs directly mandated by Federal environmental laws) are responsible for large-scale adoption and implementation of the FIDS in all their program activities. These programs also provide coordination for the FIDS in that they develop Program FIDS Implementation Plans and implement FIDS and FINDS with their Regional and State counterparts. EPA Regional FIDS participants are responsible for ensuring that assignment and use of EPA facility ID codes in all facility-related activities is complete, that the necessary information is available and correct, and that discrepancies are resolved. States must uphold the requirements of the FIDS for facilities regulated under Federal environmental laws, whether or not those facilities are also regulated under state law. For such facilities, states must use EPA facility ID

codes in all activities involving the EPA. State participants may opt for either of two types of integration with FINDS: (1) they may be indirect participants through the EPA regional office program and FINDS staff, or (2) they may be direct users of FINDS by entering data and assigning ID codes.