QUALITY ASSURANCE

PROJECT PLAN

NATIONAL EMISSIONS INVENTORY (NEI)
EMISSIONS REPORTING

Grant #: 99662706-0
Effective: 09/01/2005 - 08/31/2006

SUBMITTED BY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Date

September 26, 2005

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SECTION A1 TITLE AND APPROVAL SHEET

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A - PROJECT MANAGEMENT

SECTION A2 TABLE OF CONTENTS

PROJECT MANAGEMENT

MEASUREMENT/DATA ACQUISITION

ASSESSMENT/OVERSIGHT

DATA VALIDATION AND USABILITY

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A - PROJECT MANAGEMENT

A4 PROJECT/TASK ORGANIZATION

A4.1 Purpose/Background

The Clean Air Act of 1970 and the associated Amendments of 1990 provide statutory requirements for improving air quality in the United States. Quantification of air quality necessitates the gathering, storage, retrieval and analysis of air pollution data. These data, stored in the computer-based National Emission Inventory (NEI) database system, provide information essential to inquiry, investigation and decision-making. For example, analysis of the data may lead to a more thorough consideration of certain industries or certain emissions sources; it may provide the basis for the development or evaluation of control strategies; and it may serve as the basis for an evaluation of the effectiveness of regulations.

The State of Texas, through the Texas Commission on Environmental Quality (TCEQ), collects data pertaining to the emissions of air pollutants and reports this data in turn to the Environmental Protection Agency Administrator using Version 3.0 of the NEI format. The reported data are drawn from the TCEQ's computer-based State of Texas Air Retrieval System (STARS) for point source data and the Texas Air Emissions Repository (TexAER) for area and mobile source data. These systems are installed on the agency's computer system at TCEQ headquarters in Austin. The STARS and TexAER are administered by the Air Quality Planning and Implementation Division (AQP&ID) of the Chief Engineer's Office (CEO). Data are updated and retrieved through various user-generated programs in this system, which is accessible to users via both a Wide Area Network (WAN) and a Local Area Network (LAN).

Because of the importance of air emissions data, assurance of its quality is essential. A thorough description of the steps involved in the collection, analysis, entry and extraction the data are described below, immediately following a discussion of the roles and responsibilities of the many people involved in these tasks.

A4.2 Roles and Responsibilities

Organization Chart: A personnel organization chart for this project may be found in Appendix A of this document.

Specific Roles and Responsibilities:

> Data Services Work Leader (Point Source): Serves as project manager for NEI Emissions Reporting; is responsible for overall functioning of emissions inventory (EI) data management activities. This position's responsibilities are shared by several staff members. Responsibilities include but are not limited to:

A4.2 Roles and Responsibilities (continued)

* Ensuring timely and accurate data entry into STARS of air pollution data pertaining to targeted industry annual Emission Inventory Questionnaires (EIQs).

* Providing reports to management concerning air program reporting.

* Participating in budgetary proceedings and grant negotiations for fiscal support of data management.

* Coordinating data flow from Quality Assurance Specialists.

Program Specialist: Transmits the reportable annual point source emissions inventory data from the STARS to NEI; and area and mobile source data from the TexAER to NEI. Responsibilities include but are not limited to:

* Ensuring timely transmission of required annual emissions inventory data from the STARS and TexAER to NEI using the established TCEQ program for data conversion/retrieval.

* Providing minimally-reportable data for Federal use.

* Providing training for personnel of use of data system.

* Serving as EPA point of contact for TCEQ air emissions inventory data.

Quality Assurance Team Leaders: Oversee the work of the quality assurance specialists and the training of these specialists; oversee the education of the regulated community in matters related to the emissions inventory. Responsibilities include but are not limited to:

* Providing adequate and timely training to Quality Assurance Specialists to enable a timely and complete review of submitted data.

* Assigning review of Emission Inventory Questionnaires to Quality Assurance Specialists taking into consideration the complexity of the account and the skill level of the staff.

* Setting quality assurance standards; initiating and coordinating projects and activities that improve the overall quality of the data.

* Participating in budgetary proceedings and grant negotiations for fiscal support of data analysis.

A4.2 Roles and Responsibilities (continued)

* Organizing presentations for the annual emissions inventory workshop for submitting companies; coordinating other educational activities.

* Participating in national meetings and with EPA to stay current in emissions inventory reporting, emissions determination methodologies and other related issues.

* Directing the collection and quality assurance of area and mobile source activity data and model inputs.

Quality Assurance Specialists: These are Natural Resources Specialists who quality assure data used for compiling emissions inventories. This includes review of data submitted by targeted industries on the annual EIQs, reviewing collected activity data for area source categories, and operating appropriate models for onroad and nonroad mobile source categories. Responsibilities include but are not limited to:

* Completing timely quality assurance of required annual and daily (or seasonal) emissions inventory information.

* Providing input as requested for quality assurance of data for State use.

* Providing training and technical assistance to companies submitting EIQs.

* Maintaining documentation on review process and significant findings.

* Reviewing activity data and methodologies for compiling area source emissions inventories.

* Quality assuring input data for the onroad and nonroad mobile models.

Tracking Staff (Point Source): Assist with data management and the management of work flow through the emissions inventory process. Responsibilities include but are not limited to:

* Extracting and mailing the EIQs for affected facilities.

* Tracking EIQs throughout the QA and data entry processes.

A4.2 Roles and Responsibilities (continued)

Data Entry Staff (Point Source): Enter the EI data into STARS. Responsibilities include but are not limited to:

* Performing timely and accurate data entry of emissions data; notifying the appropriate QA Specialist if any data is not of a form acceptable to STARS.

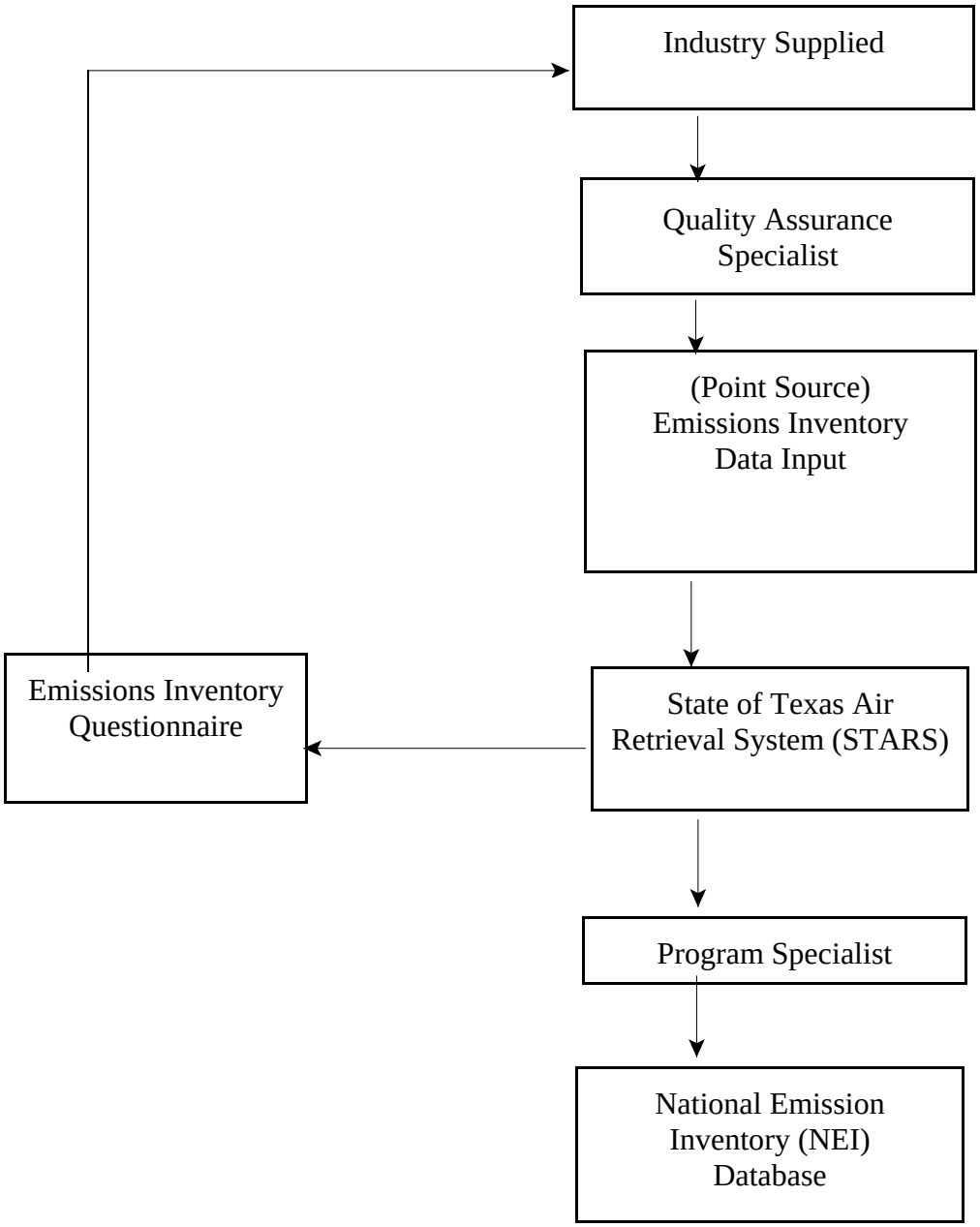
* Confirming with the appropriate QA Specialist that data has been entered.

* Maintaining a record of data entered.

* Maintaining a filing system for EIQs, which must remain on site for two years; preparing files for long-term storage at Texas State Archives after two years have passed, which is per our published file retention schedule that is required by state law.

Point Source

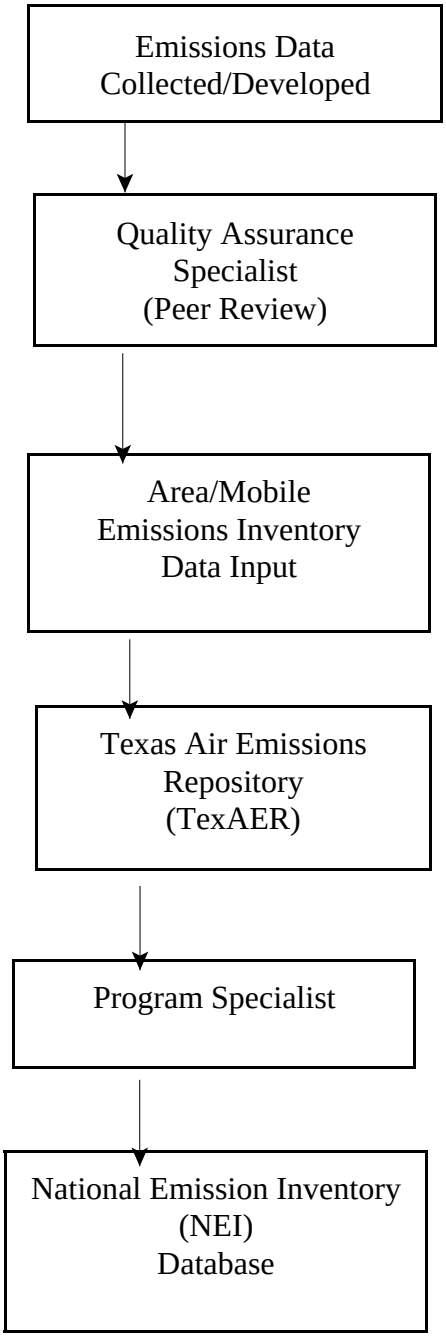
Data Flow Diagram:



SECTION A4 PROJECT/TASK ORGANIZATION
(continued)

Area/ Mobile Source:

Data Flow Diagram:



A - PROJECT MANAGEMENT

A6 PROJECT/TASK DESCRIPTION

A6.1 Purpose/Background

The TCEQ, in compliance with the Clean Air Act Amendments and operating under the authority of the Texas Clean Air Act, Texas Health and Safety Code § 382.014, and in accordance with 30 Texas Administrative Code § 101.10 (30 TAC § 101.10), which is reproduced in Appendix B, conducts annual inventories of air emissions from point sources and periodic inventories of emissions from area sources, non-road mobile sources and on-road mobile sources. The inventory conducted for each source type is discussed in detail below. All data stored in the STARS and the TexAER are backed up daily by the Information Resources Department and is standard for our agency.

Point Sources: Information on air emissions from point sources is collected annually through the emissions inventory (EI) process. Most sites for which an EI has previously been submitted continue to meet the applicability requirements of 30 TAC § 101.10 each year and therefore routinely submit annual EIs. If an EI has never been submitted for a site that meets the applicability requirements of this rule, the company must submit an initial EI. Although the burden of determining whether a site is required to submit an EI lies with the owner of the site, the TCEQ does attempt to identify and notify all sites that may meet the applicability requirements of 30 TAC § 101.10. This identification is most often accomplished through queries of STARS. Additionally, an annual query of the agency's Title V tracking database ensures that all industrial sites holding Title V permits are asked to submit EIs, while an annual query of the agency's fees database reveals sites paying fees on emission rates that exceed the reporting thresholds identified in 30 TAC § 101.10. Occasionally, the agency's Field Operations Division may identify a site that has not been detected by the above methods but for which an EI should be submitted.

For each facility believed to meet the applicability requirements of 30 TAC § 101.10, tracking staff members generate an Emissions Inventory Questionnaire (EIQ) from STARS. This report, which reflects the most recent data available for the site, is the mechanism by which companies may update account information and emission rates. (A sample EIQ may be found in Appendix C.) Approximately 2000 EIQs are mailed each year. Of these, approximately 1750 are printed on paper, with the remaining 250 being generated in electronic format.

Ideally, all EIQs would be mailed before the end of the calendar year for which the data are being requested, although delays do occur. In order to ensure that companies have sufficient time to complete and submit their EIQs, they are given until March 31st or 90 days from the date the EIQ was mailed to them, whichever is later.

Upon receipt of an EIQ, tracking staff updates the workflow tracking database with the date that the EIQ was received and any changes in contact information. They then deliver the EIQ to the appropriate Quality Assurance (QA) Specialist (reviewer) designated by the Quality Assurance Team Leaders, who have also ranked the priority of each account with a numerical score. The accounts that are assigned the highest scores, representing the more significant industrial sources located in or near nonattainment areas, are to be reviewed first in order to ensure that they receive thorough scrutiny. Each reviewer paces their work throughout the year to ensure that each EIQ is adequately reviewed. During EIQ review, QA reviewers use a checklist (Appendix D) that helps to standardize and ensure the thoroughness of the QA process. Highlights from this checklist are discussed below.

A6.1 Purpose/Background (continued)

As a first step in the QA process, the reviewer will obtain an overview of the account structure, evaluate the completeness of that structure in relation to available plot plans and process flow diagrams, and verify that the company has submitted all required information. The structure of the account should represent all of the individual facilities capable of generating emissions by Facility Identification Numbers (FINs), the points at which these emissions may enter the atmosphere by Emission Point Numbers (EPNs), and any associated control devices used to abate the emissions by Control device Identification Numbers (CINs). Facilities, control devices, and emission points are linked together to create emissions paths at which emission rates are reported. Annual emission rates must be reported for all sites, while ozone season emission rates are required for sites located in the eastern half of Texas or in El Paso County. This requirement ensures that all sites in nonattainment and near nonattainment counties report ozone season rates for use in ozone modeling projects. In addition to updated emission rates, the company must supply adequate sample calculations and material throughput data to allow the reviewer to verify the reported emission rates. Special attention is paid to whether new requirements, such as the recent addition of NH_3 and $PM_{2.5}$, are being met by the company.

Once the reviewer has completed this account overview, the technical summary report from the previous year is consulted to identify any outstanding issues or problems and any work that the company agreed to do to improve the data submitted on their next EIQ. Upon verification that all of these issues have been addressed by the company, the reviewer will identify a representative selection of facilities to be subjected to detailed review. Usually, targeted emissions sources or sources with the largest emissions are reviewed most closely. Targeted sources refer to those emissions sources whose emissions determinations are closely reviewed for accuracy due to their potential impact on the inventory. First, the reviewer verifies that emissions were calculated using the most accurate methods available to the company; where emission factors were used, the reviewer will verify that the most current factors were employed. The reviewer then independently calculates a representative selection of facilities and compares these numbers to those submitted by the company. In addition to recalculating a representative selection of sources, sources are also identified for recalculation if emissions from a source deviate greatly from historic rates, comprise significant amounts of ozone precursors, or are not consistent with expected emission rates for the industry type. When accurate emissions data are available from other databases the reviewer will compare these data to the numbers reported on the EIQ. Databases used for comparison included the national Acid Rain Database and the Toxic Release Inventory (TRI) database. If discrepancies are discovered, the reviewer will contact the company for clarification and, if necessary, may request that certain data be revised. If no such problems are found, and once a sufficient number of facilities have been investigated and the associated emission rates have been found to be reasonable, the reviewer will accept the emissions data as submitted. Once the validity of the emission rates has been verified, the reviewer will consider the details of the account. The reviewer will check that information such as determination methodology has been updated by the company; will verify the accuracy of Universal Transverse Mercator (UTM) coordinates of emission points, of Source Classification Codes (SCCs) assigned to facilities, and of the parameters associated with both emission points and facilities; and will verify that all requisite information has been filled in by the company. The majority of this review is accomplished by electronic reports and other electronic review tools. However, the recent acquisition of GIS mapping software has made significant improvements in identifying and correcting suspect UTM coordinates, which are essential to emissions modeling activities.

Upon completion of the QA process for an EIQ, the reviewer writes a technical summary report for the account. In this report, the reviewer provides basic information about the account and its structure, lists

the total emissions reported for the account, explains any large increases or decreases in emissions rates, describes the QA work that was done, notes any changes that the company has agreed to make on a future EIQ and details any unresolved issues. This technical summary will provide a starting point for the QA process during the following year's review.

When the reviewer has completed the QA work on an EIQ and has written the technical summary for the account, the data are ready for entry into STARS. If the EIQ was submitted in electronic format, the reviewer uploads the data directly into the database. If the EIQ was submitted in paper format, the reviewer forwards the file to the data management group for manual data entry.

The data entry staff member who receives the account enters or updates all new or revised information on the EIQ. In the event that an error or omission in the data is suspected, the data entry staff member refers the matter back to the account reviewer. When all data have been entered or updated, the data entry staff member runs a report from STARS to calculate the total criteria pollutants for the account and compares the numbers on this report to those account-wide totals submitted by the company. If the numbers differ, the data entry staff member reviews their work for data-entry errors. If none are found, then the data entry staff member refers the matter back to the account reviewer. If the reviewer cannot find the source of the discrepancy, the company is contacted to resolve the matter.

Once the data entry and verification processes have been completed, the reviewer will close the account by completing the post-summary process. The reviewer notes the account totals in the technical summary and runs a contaminant summary report reflecting the total account-wide emissions of each contaminant. The reviewer then forwards this contaminant summary report to their team leader along with the corresponding technical summary. The team leader reviews all information, signs a cover letter, and has the letter and the contaminant summary report mailed to the company's account contact. The company may, upon receipt of the letter and report, contact the account reviewer regarding any suspected errors in the data. The reviewer will then work with the company to resolve the matter. When both the reviewer and the company are satisfied that the data in STARS are accurate, the account is considered closed for the year.

When at least 95 percent of the accounts in an EIQ cycle have been closed, Quality Assurance Team members conduct a global quality assurance survey of all data in STARS, identifying incorrect or suspicious data, including: large sources of unspeciated VOCs, suspiciously high annual emissions rates, suspiciously high and suspiciously low ozone season emissions rates, probable errors in emissions determination methodologies, suspect emission point parameters, and incorrect or suspicious UTM coordinates for emission points. By comparing the numbers in STARS to those in the Toxic Release Inventory database, the team may identify discrepancies in the reporting of hazardous air pollutants. Any suspicious or incorrect data discovered during this process is referred back to the QA Specialist who reviewed the account, so that the matter may be investigated and documented in the account's technical summary.

As a final step in the global QA process, the Quality Assurance Team considers each account individually, comparing the total account emissions for the current year with those from the previous year. After identifying the 100 accounts with the largest total change in emissions, the Team Leader consults the technical summary for each account to verify that the change is legitimate. If the technical summary does

not sufficiently explain the change in emissions, the Team Leader refers the matter back to the QA Specialist who reviewed the account so that the matter may be investigated; any changes made are thoroughly documented in the technical summary.

Following the completion of the global QA process, data services staff members verify that the data are in correct input format and ready for transmission to NEI.

Area Sources: These are required for statewide Periodic Emissions Inventories (PEI). The agency staff is responsible for compiling the PEI. Parts of these may be contracted out. Agency staff manage the contracts and QA the data before submittal to EPA. Other parts of the PEI may be developed by agency staff. Calculations from staff and/or contractor are compiled into NIF 3.0 format and approved by managers following the QA process. The PEI may be developed using a mixture of individual category-specific methodologies, depending upon the significance of the category. The "bottom-up" approach involves the collection of activity data associated with the inventory year and with the specific area source category. This approach may use surveys, investigations, and follow-up telephone calls to collect and confirm the accuracy of the data. Surveys may be used to collect data for the entire population of a category, however, more often, enough survey data may be collected to obtain a statistically valid data set. From this, profiles (used with other surrogate data) may be established to estimate emissions for the inventory area. The "top-down" approach of emissions development involves the use of default data such as per capita population or employment figures with standard emission factors. The PEI may use all these approaches within one inventory. Contracted data may overlap with other contracted data as well as with agency work.

Staff and contract managers will run compare programs as part of the QA process to determine which emission sets to include in the final PEI document. For appropriate area source categories, a comparison is made with like point source categories in the Point Source PEI in order to prevent the double counting of emissions.

Area source QA procedures involve an audit team comparing new emissions data with previous data sets and/or other current data sets. The different data sets for each category are reviewed, side-by-side, using the TexAER Compare program or using a spreadsheet. Categories indicating major differences between the inventories in their emissions are flagged for review. The audit team then conducts a review of the methodologies used in the different inventories for these flagged categories. For each flagged category the best method used is chosen and the emissions resulting from that method are flagged as being accepted over all other emissions under the review. Documentation is provided describing reasons for choosing a particular method. This process is repeated for each flagged area source category. The resulting set of emissions will be considered the best selected from two or three sets of emissions. Minor differences in the sets of emissions data will also be considered. A decision must be made for every category regardless of significance. Minor differences may be resolved by making assumptions that one inventory is generally considered superior to the others, so all minor emissions differences will default to that inventory. For some categories only one set of emissions may exist. These will be automatically be flagged as the accepted emissions.

A6.1 Purpose/Background (continued)

The audit team also conducts a thorough review of all area source documentation, category by category. The purpose of this is to determine if the most current methodologies were used in development of the inventory. Acceptance of methodologies may be related to resources, time restrictions, availability of activity data, and other factors influencing the inventory. Comments from this review are submitted to the originator of the inventory with required actions or suggestions for corrections. After approval by the staff, emissions are entered into the state emission inventory data system. Area Source Categories to be inventoried are:

- Tank Truck Unloading
- Vehicle Refueling
- Tank Trucks in Transit
- Underground Storage Tank Breathing
- Aircraft Refueling
- Petroleum Vessel Loading/Unloading
- Architectural Coatings
- Industrial Surface Coatings
- Auto Refinishing
- Traffic Markings
- Solvent Cleaning Operations
- Dry Cleaning—Coin Operated
- Dry Cleaning—Commercial/Industrial
- Graphic Arts
- Cutback & Emulsified Asphalt
- Consumer-Commercial Solvent Use
- Municipal Waste Landfills
- Wastewater Treatment at POTWs and Package Plants
- Industrial Wastewater Treatment and TSDFs
- Pesticide Application
- Residential and Commercial/Institutional Fuel Combustion
- Small Industrial Fuel Combustion
- Structure Fires
- Slash/Prescribed Burning
- Forest Fires
- Bakeries
- Breweries
- Wineries
- Distilleries
- Catastrophic/Accidental Releases
- Open Burning
- Land Clearing Waste Burning
- Yard Waste Burning
- Residential Wood Combustion
- Agricultural Burning
- On-site Incineration

A6.1 Purpose/Background (continued)

- Orchard Heaters - these are insignificant and seasonal sources of emissions and have never been included in the inventory.
- SOCMI Tanks; Barge, Tank, Tank Truck, Rail Car, and Drum Cleaning - these have been determined to be covered in the Point Source inventory.
- Charcoal Grilling - this category will be added for PM inventories soon to be implemented.
- Firefighter Training - this category is considered insignificant due to being highly localized.
- Vehicle Fires

After all data compilation is complete, the Program Specialist extracts data in the NEI Input Format 3.0 (NIF 3.0) for area sources.

Non-Road Mobile Sources: These are required for statewide Periodic Emissions Inventories (PEI). Statewide data is used for air quality or human exposure modeling. Non-road mobile emissions are prepared for various categories of small engines and aircraft, locomotives, and marine engines. The emissions are prepared for small engines by the EPA's NONROAD Model for the current inventory year. Aircraft, locomotive, and commercial marine vessel emissions are prepared in accordance with approved EPA models and other procedures which may include use of survey data and the development of relevant emission factors.

The agency staff is responsible for compiling the PEI. Parts of these may be contracted out. Agency staff manage the contracts and QA the emissions before submittal to EPA. Other parts of the PEI may be developed by agency staff. Calculations from staff and/or contractor are compiled and approved by managers following the QA process. The PEI may be developed using a mixture of individual category-specific methodologies, depending upon the significance of the category. The "bottom-up" approach involves the collection of activity data associated with the inventory year and with the specific nonroad mobile source category. This approach may use surveys, investigations, and follow-up telephone calls to collect and confirm the accuracy of the data. Surveys may be used to collect data for the entire population of a category; however, more often, enough survey data may be collected to obtain a statistically valid data set. From this, profiles (used with other surrogate data) may be established to estimate emissions for the inventory area. Where appropriate, this data will be input into the NONROAD model to calculate more accurate emissions for the inventory area. The "top-down" approach of emissions development involves the use of default data such as per capita population or national equipment population numbers with standard emission factors. The PEI may use all these approaches within one inventory. Contracted data may overlap with other contracted data as well as with agency work. Agency staff and contract managers will run "compare" programs as part of the QA process to determine which emission sets to include in the final PEI document.

The QA for the NONROAD model categories consists of the review and selection of the input data since basic model methodologies cannot be altered. Input parameters such as equipment types and populations are thoroughly reviewed for accuracy and reasonableness. Survey data must be checked for statistical validity. Where more than one set of input parameters exist the compare approach is used to determine the most accurate set. Some data may be based upon national averages rather than local surveys, and some may be a mixture of both types. Determinations are made, category by category, as to which data is most valid and useful. Data is compiled for EPA NEI Version 3.0 format.

A6.1 Purpose/Background (continued)

On-Road Mobile Sources: Required for statewide CERR inventories. On-road mobile emissions are prepared by using EPA's current Mobile model to produce emission factors and either a local travel-demand model or the Federal Highway Administration's (FHWA) Highway Performance Monitoring System (HPMS) data for Vehicle Miles Traveled (VMT). The QA for the MOBILE model categories consists of the review and selection of the input data since basic model methodologies cannot be altered. Input parameters such as emissions controls and VMT are reviewed for accuracy and reasonableness. Some data may be based on national averages rather than from local surveys. Determinations are made as to which data is the most valid. Data is compiled for EPA in NEI Input format (NIF 3.0).

A6.2 DESCRIPTION OF THE WORK TO BE PERFORMED

1. Measurements Expected: Point source surveys will provide annual actual emissions with periodic data (seasonal emissions) for non-attainment areas. Non-Point source surveys will provide collection of activity data (i.e., employment figures, natural gas or liquified petroleum gas consumed) for area source emissions. Mobile source inputs will provide data for travel demand and the mobile models for development of mobile source emissions.

2. Applicable Technical Quality Standards or Criteria: Checklist in Appendices D outline criteria to be used. Section A9 lists reference material.

3. Special Personnel and Equipment Requirements: Staff performing data review and analysis are professional engineers or have sufficient education/experience to perform emission estimate calculations and work with models. The state has the computer equipment necessary to run the current MOBILE and NONROAD models. Training requirements are outlined in Section A8.

4. Assessment Techniques: The following activities may be utilized for review of data:
   - EIQ and Survey Review
   - Comparison of like industries
   - Checklist Requirements
   - Peer Review
   - Audit of Coordinates (Point Sources)
   - State audit of emission estimate calculations completed before data is forwarded to EPA.
   - Comparison of Permit Allowables to Emission Inventory Surveys (Point Sources)
   - Comparison of emissions from acid rain database from power plants to the data provided in Emission Inventory Surveys (Point Sources)
   - Engineering calculations of emission rates
   - Comparison of Toxic Release Inventory data from sources to the data provided in Emission Inventory Surveys

A6.1 Purpose/Background (continued)

5. Schedule of Work (estimated)
   Preparation of Surveys ... Dec. 2003 - Feb. 2004
   Receipt of Surveys ... Jan. 2004 - Sep. 2004
   Internal Review ... Mar. 2004 - Nov. 2004
   Preparation of Area Source Inventory ... Sep. 2005 - Jan. 2007
   Preparation of Mobile Source Inventory ... Sep. 2005 - Aug. 2006
   Review of previous Biogenic Inventory ... Sep. 2005 - Jan. 2007
   Approval of Inventory ... Aug. 2006 - Dec. 2006
   Compilation of data in NEI Format ... Sep. 2006 - Dec. 2006
   Submittal to EPA: Emission Report to the Region ... Jun. 2007
   Data collection for 2008 Periodic Emissions Inventory ... Jan. 2008 - Dec. 2008
   Data analysis for 2008 Periodic Emissions Inventory ... May 2008 - June 2010

6. Project and Quality Records Required:
   Completed surveys on file in State file room
   Completed checklists on file in State file room
   Documentation of other data bases used for information on file in State file room
   Emission Report to EPA Region 6 on file in State file room
   Correspondence to sources and EPA on file in State file room

A - PROJECT MANAGEMENT

A7 QUALITY OBJECTIVES AND CRITERIA

Scope: Emission data collected for reporting to NEI will encompass industrial air pollution sources, area sources, non-road mobile sources, and on-road mobile sources.

Reporting Frequency: Emissions inventories will be entered on an annual basis for point sources and every three years for area and mobile source emissions on a schedule set by mutual agreement between the TCEQ and EPA, Region 6.

Intended Uses of the Data: Please refer to Section A4 of this plan.

POINT SOURCE MINIMALLY REPORTABLE DATA

Transmittal Table:
Record Type, State FIPS, County FIPS, Organization Name, Transaction Type, Inventory Year, Inventory Type Code, Transaction Creation Date, Incremental Submission Number, Contact Person Name, Contact Phone Number, Telephone Number Type Name, Electronic Address Text, Electronic Address Type Name, Source Type, Affiliation Type, Format Version

Site Table:
Record Type, State FIPS, County FIPS, State Facility ID, NAICS Primary, Facility Name, Location Address, City, State, Zip Code

Emission Unit Table:
Record Type, State FIPS, County FIPS, State Facility ID, Emission Unit ID

Emission Release Point Table:
Record Type, State FIPS, County FIPS, State Facility ID, Emission Release Point ID, Emission Release Point Type, X Coordinate, Y Coordinate, UTM Zone, XY Coordinate Type, Horizontal Collection Method Code, Horizontal Accuracy Measure, Horizontal Reference Datum Code, Reference Point Code

Emission Process Table:
Record Type, State FIPS, County FIPS, State Facility ID, Emission Unit ID, Emission Release Point ID, Process ID, SCC

Control Equipment Table:
Record Type, State FIPS, County FIPS, State Facility ID, Emission Unit ID, Process ID, Pollutant Code, Primary Device Type Code

Emission Period Table:
Record Type, State FIPS, County FIPS, State Facility ID, Emission Unit ID, Process ID, Start Date, End Date

POINT SOURCE MINIMALLY REPORTABLE DATA (continued)

Emission Table:
Record Type, State FIPS, County FIPS, State Facility ID, Emission Unit ID, Process ID, Pollutant Code, Start Date, End Date, Emission Numeric Value, Emission Unit Numerator, Emission Type

AREA AND NON-ROAD MINIMALLY REPORTABLE DATA

Transmittal Table:
Record Type, State FIPS, County FIPS, Organization Name, Transaction Type, Inventory Year, Inventory Type Code, Transaction Creation Date, Incremental Submission Number, Contact Person Name, Contact Phone Number, Telephone Number Type Name, Electronic Address Text, Electronic Address Type Name, Source Type, Affiliation Type, Format Version

Emission Process Table:
Record Type, State FIPS, County FIPS, SCC

Control Equipment Table:
Record Type, State FIPS, County FIPS, SCC, Pollutant Code, Primary Device Type

Emission Period Table:
Record Type, State FIPS, County FIPS, SCC, Start Date, End Date

Emission Table:
Record Type, State FIPS, County FIPS, SCC, Pollutant Code, Start Date, End Date, Emission Numeric Value, Emission Unit Numerator, Emission Type

ON-ROAD MOBILE SOURCE MINIMALLY REPORTABLE DATA

Transmittal Table:
Record Type, State and County FIPS Code, Organization Name, Transaction Type, Inventory Year, Inventory Type Code, Transaction Creation Date, Incremental Submission Number, Contact Person Name, Contact Phone Number, Telephone Number Type Name, Electronic Address Text, Electronic Address Type Name, Source Type, Affiliation Type, Format Version, Tribal Code

Emission Period Table:
Record Type, State and County FIPS Code, SCC, Start Date, End Date, Tribal Code

Emission Table:
Record Type, State and County FIPS Code, SCC, Start Date, End Date, Pollutant Code, Emission Numeric Value, Emission Unit Numerator, Emission Type, Tribal Code

BIOGENICS MINIMALLY REPORTABLE DATA

Note : Biogenics data will not be reported this fiscal year.

A - PROJECT MANAGEMENT

A8 SPECIAL TRAINING/CERTIFICATION

All quality assurance staff shall have a minimum of a bachelor's degree in engineering or related scientific discipline. These staff are trained in standard emissions estimation methods. Current training requirement is "in house" or on-the-job training. Memberships in environmental organizations are voluntary.

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A - PROJECT MANAGEMENT

A9 DOCUMENTS AND RECORDS

A9.1 Purpose

The completed point source EIQs, Area Source, Non-Road Mobile Source, and On-Road Mobile Source data will be retained by the state for a period of ten years and then destroyed. The quality assurance technical summary documents (as described in Section A6) are retained for the same period as the completed EIQs. These files are retained on site for two years, and then transferred to the Texas State Archives for the remainder of the retention period. Only the base year inventories (1990 for one-hour State Implementation Plans (SIPs) and 2002 for eight-hour SIPs) are retained permanently in hard copy. Summary and trends data is available on the TCEQ web site.

A9.2 Information Included in the Reporting Packages

Electronic Submission to EPA: Submit files to the EPA as indicated by instructions on the "Technology Transfer Network Clearinghouse for Inventories & Emission Factors website."
http://www.epa.gov/ttn/chief/nif/cdx.html

EPA Region Emission Report:

Point Source: Point source emissions data for the most recently completed EIQ year is extracted from STARS. Emissions of volatile organic compounds (VOC), oxides of nitrogen (NO_X), and carbon monoxide (CO) are summed for each account located either in an eight-hour ozone nonattainment area or in a county participating in the Early Action Compact in Texas. These summations include the annual emissions totals (tons per year) and ozone season totals (represented as tons per day). Two sets of tables are to be submitted. The first set is county level summations for these emissions categories. The tables are grouped by nonattainment area with total emissions provided for each nonattainment area. The second set of tables is company level summaries. These summaries are also grouped by nonattainment area.

Submitted files contain all mandatory information described in version 3.0 of the NIF. Yearly submittals contain emissions associated with both Criteria and Hazardous Air Pollutant classes. The emission file contains annual and periodic ozone season emission rates with units of tons per year and pound per day respectively. Emission rates submitted within the file represent emissions of VOC, NO_X, sulfur dioxide (SO_2), lead (Pb), fine particulate matter (PM_{10} and $PM_{2.5}$), ammonia, CO, and other pollutants for which an EPA Pollutant code exists within the STARS data base.

The report to the region includes a summary of the methodology used for developing the most recent calendar year periodic emissions inventory and the quality assurance measures used to review the data.

A9 DOCUMENTS AND RECORDS (continued)

Area, Mobile, & Biogenic Sources: Emissions from area, onroad mobile, nonroad mobile, and biogenic sources are reported as county totals for all the counties in Texas. The sulfur oxides, VOC, NOx, CO, $PM_{10,}$ $PM_{2.5,}$ and ammonia emissions are reported in annual tons per year and in daily tons per average ozone season day. For each category emissions are reported in tables by individual county. In addition, emissions for each category, for each county are reported by individual Source Classification Code (SCC). For nonroad mobile sources the SCCs are combined into classes (e.g., lawn and garden equipment, construction equipment) as class totals for each county. Also, summary tables are provided which include major category (point, area, onroad, nonroad, and biogenic) totals for each county. These tables are grouped by nonattainment area, Early Action Compact Area, etc. In addition to the ozone nonattainment area inventories, a statewide emissions inventory is available for all categories.

Point Source

Emission Inventory Questionnaire
Technical Summary
Completion Checklist
Contaminant Summary Report and Verification Letter

Area, Non-Road Mobile, and On-Road Mobile Sources

Emissions calculations documentation
Methodology descriptions
Activity data tables
Survey forms
Reference lists
Emission factor sources
Emissions comparison tables
Contractor scopes of work
Contractor work plans
Contractor inventory documentation

A9.3 References

EPA CHIEF Emission Factor and Inventory Group
http://www.epa.gov/ttn/chief

EPA NEI CDX Data Submittal Procedures
http://www.epa.gov/ttn/chief/nif/cdx.html

Emission Inventory Improvement Program (EIIP)
http://www.epa.gov/ttn/chief/eiip

EPA 1999 Checklist

EPA *Emissions Inventory Guidance for Implementation of Ozone and particulate Matter-National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations*, EPA-454/R99-0006, April 1999

EPA *Handbook for Criteria Pollutant Inventory Development: A Beginner's Guide for Point and Area Sources*, EPA-454/R-99-037, September 1999

Emission Inventory Improvement Program, Volume I, *Introduction and Use of EIIP Guidance for Emissions Inventory Developmen*t, EPA-454/R-09-004a, July 1997

Emission Inventory Improvement Program, Volume II, *Point Sources Preferred and Alternative Methods*, EPA-454/R-97-004b, July 1997

Emission Inventory Improvement Program, Volume III, *Area Sources*

Emission Inventory Improvement Program, Volume IV, *Mobile Sources*

Emission Inventory Improvement Program, Volume VI, *Quality Assurance Procedures*

Emission Inventory Improvement Program, Volume VII, *Data Management Procedures*

Emission Inventory Improvement Program EIIP-Phase 2; Future Directions for the Millennium

EPA January 1995 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition and Supplements A-F*, AP-42

A9 DOCUMENTS AND RECORDS (continued)

EPA Non-Road Model

EPA On-Road Model

EPA *Quality Review Guidelines for 1990 Base Year Emission Inventories*; EPA-454/R-92-007; August 1992

EPA *Procedures for the Preparation of Emission Inventories for Carbon Monoxide and Precursors of Ozone*, Volume 1, EPA-454/4-91-016; May 1991

EPA August 1997 *Guidance for Quality Assurance Project Plans*, EPA QA/G-5 Final

EPA *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, EPA-450/4-81-026d (Revised)

B - DATA GENERATION AND ACQUISITION

SECTION B5 QUALITY CONTROL

Point Source: As a first step in the quality control process, the TCEQ verifies that its list of sites meeting the reporting thresholds identified in 30 TAC § 101.10 (Appendix B) is as accurate and complete as possible. First, staff query STARS to identify sites that exceed the reporting thresholds. The results of this query are then compared with other agency databases, such as the Title V and emissions fees databases. Occasionally, querying these other databases leads to the identification of sites that meet the applicability requirements of 30 TAC § 101.10.

The second step in quality control is the Quality Assurance Team Leaders' prioritization of account reviews. The accounts that represent the more significant industrial sources are assigned the highest priority scores.

The third step in quality control is the review of the EIQ by a Quality Assurance Specialist (reviewer). Each Quality Assurance Specialist will first review the highest priority accounts in order to ensure that they receive thorough scrutiny. The reviewer will pace their review work throughout the year to ensure that enough time is allotted to adequately review all EIQs. As described in Section A6, the reviewer verifies the completeness of the EIQ, the suitability of the applied emissions determination methodology, the validity of submitted emissions rates, and the accuracy of technical details. The reviewer also compares the emissions rates reported on the EIQ with the numbers contained in such other databases as the national Acid Rain Database; any discrepancies are investigated and resolved. The reviewer also uses electronic reports and electronic review tools to identify questionable data.

Upon completion of the review by the Quality Assurance Specialist, the EIQ data are entered into the STARS by data management staff. If EIQ data were submitted in electronic format, the reviewer uploads the data directly into STARS, and forwards any necessary corrections to data entry staff. When all data have been entered or updated, the data management staff review the site-wide criteria pollutant totals to make certain that they match the totals submitted by the company and/or approved by the quality assurance staff. The pollutant totals are then sent to the submitting company for a final review.

When at least 95 percent of the accounts in an EIQ cycle have been closed, the Quality Assurance Team conducts a global quality assurance survey of all data in STARS. This process, which leads to the identification of incorrect or suspicious data, is detailed in Section A6.

Once the global quality assurance survey has been completed, and any errors corrected, the data is extracted from STARS for uploading to NEI.

Area and Mobile Sources: Emissions are well documented in order to trace the sources of the methodologies and activity data, including work performed by contractors. Checklists, emissions comparison tables, and methodology audits are used in the quality assurance process to ensure completeness of data and conformity with methodologies. Peer review of contracted and staff-generated emissions estimations are conducted by staff. Modeling staff reviews the data as well prior to their usage. Rule Effectiveness and Rule Penetration are incorporated into affected category emissions. Emissions from significant point sources are subtracted where applicable. The emissions are run through a comparison program with previous year emissions to detect significant differences. These significant

differences are further reviewed for accuracy. All categories are reviewed to determine validity. Reviews are made of certain counties known to have high activities of specific categories (e.g., oil and gas production).

B -DATA GENERATION AND ACQUISITION

B9 NON-DIRECT MEASUREMENTS

Point Source : All point-source data are acquired directly from reporting companies.

Area & Mobile: Categories not specifically listed in Section A6 will not be generated by TCEQ. Other categories will be obtained from EPA draft versions of the NEI. Quality control requirements described in Section B5 will be applied, which may require replacement or elimination of generic for specific data. Generic data would be replaced with better activity or surrogate data. Better activity data consists of the use of the results of surveys of categories reporting actual fuel use or paint or solvent use, which is used in emissions calculations. More appropriate surrogate data might be used (e.g., the actual number of employees occupied in an area source business type) to estimate emissions for a particular county, for a particular year as opposed to using the total county population to estimate emissions from that category.

Additional Data Sources

Texas Comptroller of Public Accounts
- -Population Data
- -Gasoline Sales Data

United States Census Bureau
- -County business patterns (employment)

Texas Department of Transportation (TxDOT)
- -Vehicle Miles Traveled
- -Lane Miles

National Oceanic and Atmospheric Administration (NOAA)
- -Temperature data

United States Department of Agriculture Forest Service
- -Fire data

United States Geological Survey (USGS)
- -Land Use data

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C ASSESSMENT/OVERSIGHT

C1 ASSESSMENTS AND RESPONSE ACTIONS

A number of data quality assessments are performed on the data before it is sent to EPA.

Point Source: When at least 95 percent of the accounts in an EIQ cycle have been closed, Quality Assurance Team members conduct a global quality assurance survey of all data in STARS, identifying incorrect or suspicious data, including: large sources of unspeciated VOCs, suspiciously high annual emissions rates, suspiciously high and suspiciously low ozone season emissions rates, probable errors in emissions determination methodologies, suspect emission point parameters, and incorrect or suspicious UTM coordinates for emission points. By comparing the numbers in STARS to those in the Toxic Release Inventory database, the team may identify discrepancies in the reporting of hazardous air pollutants. Any suspicious or incorrect data discovered during this process is referred back to the QA Specialist who reviewed the account, so that the matter may be investigated and documented in the account's technical summary.

As a final step in the global QA process, the Quality Assurance Team considers each account individually, comparing the total account emissions for the current year with those from the previous year. After identifying the 100 accounts with the largest total change in emissions, the Team Leader consults the technical summary for each account to verify that the change is legitimate. If the technical summary does not sufficiently explain the change in emissions, the Team Leader refers the matter back to the QA Specialist who reviewed the account so the matter may be investigated; any changes made are thoroughly documented in the technical summary.

Following the completion of the global QA process, the Quality Assurance Team Leaders evaluate the types of errors and their causes, and when appropriate implement guidance for QA review to decrease errors discovered during the global QA process.

Area and Mobile Sources: The staff audit team conducts audits of newly completed area and nonroad mobile emissions inventories. Normally, locally developed inventories (e.g., from Councils of Governments or cities) are compared to the agency statewide inventory. Audits are performed, comparing two or more inventories for the same year and categories, to determine the most accurate methodologies being used in development. The final inventory will be comprised of data from the audited inventories with the best methodologies having been selected on a category by category basis. A compare program (see Section A6) is operated to determine best methodologies and which set of emissions data is best to use. Inventory documentation is reviewed by the audit team to determine accuracy and reasonableness of methodologies. The results of the audit are submitted to the originator of the data for changes and updates. The audit team is responsible for ensuring that updates are made or that correct replacement methodologies are implemented.

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C ASSESSMENT/OVERSIGHT

C2 REPORTS TO MANAGEMENT

Quarterly status on number of point source accounts, and area and mobile level of emissions reviewed to date are reported to section managers as part of the requirements of the formal Performance Measure Quarterly Reports and informally upon request.

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D DATA VALIDATION AND USABILITY

This is described in Section A6, Project/Task Description and Schedule.

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Appendix A

Project Personnel Organization Chart

CHIEF ENGINEER'S OFFICE
David Schanbacher, P.E., Chief Engineer

AIR QUALITY PLANNING & IMPLEMENTATION DIVISION
Candy Garrett, Director

AIR QUALITY PLANNING SECTION
Jim Smith, Acting Manager

AIR MODELING TEAM
Steve Davis, Team Leader [5]
Mary McGarry Barber [6]
Peter Ogbeide [6]

MET MODELING/ AREA TEAM
Brian Foster, Acting Team Leader [5]
Bertie Fernando [6]
Karla Hardison [6]
Anusuya Iyer [6]
Greg Lauderdale [6]
Charlie Rubick [4]
Julie Westphal [3]

INDUSTRIAL EMISSIONS ASSESSMENT SECTION
Kevin Cauble, Manager
Kathy Pendleton, Technical Lead
Paul Brochi [1,4]

EMISSIONS INVENTORY TEAM
Russ Nettles, Team Leader [5]
Adam Bullock [6]
Jill Dickey [6]
Michael Ege [6]
Gail Hogberg [6]
Matoaka Johnson [6]
Mark Muldoon [6]
Joseph Musa [6]
Danielle Nesvacil [6]
Latrice Pittman [6]
Alfred Reyes [6]
Rafael Reyes [6]
Julia Segura [6]
Danell Zawaski [6]

FEES AND EMISSIONS INVENTORY TEAM
Michael De La Cruz Team Leader [5]
Jeanette Emanuel [1,4]
Rose Grimaldo [6]
Shawna Hollon [1,4]
Stephanie Lane [7]
Martha Maldonado [6]
Cody McLain [6]
Carman Pedraza [6]
Mary Salehi [6]
Tat Wong [6]

DATA SERVICES
Denise Zachary, Lead [1]
Rene Chavira [2]
Radhika Darsi [2]
Diane Martin [2]

ASSIGNED ROLES

[1] **Data Services Lead**
[2] **Data Entry Staff**
[3] **Lead Quality Assurance Specialist**
[4] **Program Specialist**
[5] **Quality Assurance Team Leader**
[6] **Quality Assurance Specialist**
[7] **Tracking Staff**

Appendix B

Emissions Inventory Requirements

30 Texas Administrative Code § 101.10

Texas Administrative Code

TITLE 30	ENVIRONMENTAL QUALITY
PART 1	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 101	GENERAL AIR QUALITY RULES
SUBCHAPTER A	GENERAL RULES
RULE § 101.10	Emissions Inventory Requirements

(a) Applicability. The owner or operator of an account or source in the State of Texas or on waters that extend 25 miles from the shoreline meeting one or more of the following conditions shall submit emissions inventories and/or related data as required in subsection (b) of this section to the commission on forms or other media approved by the commission:

(1) an account which meets the definition of a major facility/stationary source, as defined in §116.12 of this title (relating to Nonattainment Review Definitions), or any account in an ozone nonattainment area emitting a minimum of ten tons per year (tpy) volatile organic compounds (VOC), 25 tpy nitrogen oxides (NOx), or 100 tpy or more of any other contaminant subject to national ambient air quality standards (NAAQS);

(2) any account that emits or has the potential to emit 100 tpy or more of any contaminant;

(3) any account which emits or has the potential to emit 10 tons of any single or 25 tons of aggregate hazardous air pollutants as defined in FCAA, § 112(a)(1); and

(4) any minor industrial source, area source, non-road mobile source, or mobile source of emissions subject to special inventories under subsection (b)(3) of this section. For purposes of this section, the term "area source" means a group of similar activities that, taken collectively, produce a significant amount of air pollution.

(b) Types of inventories.
(1) Initial emissions inventory. Accounts, as identified in subsection (a)(1), (2), or (3) of this section, shall submit an initial emissions inventory (IEI) for any criteria pollutant or hazardous air pollutant (HAP) that has not been identified in a previous inventory. The IEI shall consist of actual emissions of VOC, NOx, carbon monoxide (CO), sulfur dioxide (SO2), lead (Pb), particulate matter of less than 10 microns in diameter (PM10), any other contaminant subject to NAAQS, emissions of all HAPs identified in FCAA §112(b), or any other contaminant requested by the commission from individual emission units within an account. For purposes of this section, the term "actual emission" is the actual rate of emissions of a pollutant from an emissions unit as it enters the atmosphere. The reporting year will be the calendar year or seasonal period as designated by the commission. Reported emission activities must include annual routine emissions; excess emissions occurring during maintenance activities, including start-ups and shutdowns; and emissions resulting from upset conditions. For the ozone nonattainment areas, the inventory shall also include typical weekday emissions that occur during the summer months. For CO nonattainment areas, the inventory shall also include typical weekday emissions that occur during the winter months. Emission calculations must follow methodologies as identified in subsection (c) of this section.

(2) Statewide annual emissions inventory update (AEIU). Accounts meeting the applicability requirements during an inventory reporting period as identified in subsection (a)(1), (2), or (3) of this section shall

submit an AEIU which consists of actual emissions as identified in subsection (b)(1) of this section if any of the following criteria are met. If none of the following criteria are met, a letter certifying such shall be submitted instead:

(A) any change in operating conditions, including start-ups, permanent shut-downs of individual units, or process changes at the account, that results in at least a 5.0% or 5 tpy, whichever is greater, increase or reduction in total annual emissions of VOC, NOx, CO, SO2, Pb, or PM10 from the most recently submitted emissions data of the account; or

(B) a cessation of all production processes and termination of operations at the account.

(3) Special inventories. Upon request by the executive director or a designated representative of the commission, any person owning or operating a source of air emissions which is or could be affected by any rule or regulation of the commission shall file emissions-related data with the commission as necessary to develop an inventory of emissions. Owners or operators submitting the requested data may make special procedural arrangements with the Industrial Emissions Assessment Section to submit data separate from routine emission inventory submissions or other arrangements as necessary to support claims of confidentiality.

(c) Calculations. Actual measurement with continuous emissions monitoring systems (CEMS) is the preferred method of calculating emissions from a source. If CEMS data is not available, other means for determining actual emissions may be utilized in accordance with detailed instructions of the commission. Sample calculations representative of the processes in the account must be submitted with the inventory.

(d) Certifying statement. A certifying statement, required by the FCAA, § 182(a)(3)(B), is to be signed by the owner(s) or operator(s) and shall accompany each emissions inventory to attest that the information contained in the inventory is true and accurate to the best knowledge of the certifying official.

(e) Reporting requirements. The IEI or subsequent AEIUs shall contain emissions data from the previous calendar year and shall be due on March 31 of each year or as directed by the commission. Owners or operators submitting emissions data may make special procedural arrangements with the Industrial Emissions Assessment Section to submit data separate from routine emission inventory submissions or other arrangements as necessary to support claims of confidentiality. Emissions-related data submitted under a special inventory request made under subsection (b)(3) of this section are due as detailed in the letter of request.

(f) Enforcement. Failure to submit emissions inventory data as required in this section shall result in formal enforcement action under the TCAA, § 382.082 and § 382.088. In addition, the TCAA, § 361.2225, provides for criminal penalties for failure to comply with this section.

Source Note: The provisions of this § 101.10 adopted to be effective October 1, 1992, 17 TexReg 6452; amended to be effective January 27, 1995, 20 TexReg 221; amended to be effective December 23, 1999, 24 TexReg 11494

Appendix C

Sample Emissions

Inventory Questionnaire

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
EIQ REPORT

ACCOUNT:
COMPANY:
DATE -

ACCOUNT INFORMATION EIQ Year:

Account: Company: Last EI Date:

Company is Owner/Operator: BOTH Site Independently Owned (Y/N):___ No. of Employees: ____

Site Name:

Primary SIC:

Secondary SIC:

Location:

Near City: County: Region:

UTM Zone: ____ Latitude: _____

UTM North Meters: _____ Longtitude: _____

UTM East Meters: _____

Site Status:_____ Oper Schedule: ____hr/day, ____da/wk, ____wk/yr Tot Oper Hrs: _____

Seasonal Operating Percentages (NOTE: Spring % + Summer % + Fall % + Winter % must be equal to 100%)

Spring: %_____ Summer: %_____ Fall: %_____ Winter: %_____

EMISSIONS INVENTORY CONTACT INFORMATION

Name: _____ Title: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: - _____

Bus Phone: X _____ Fax: _____ Email:

PLANT CONTACT INFORMATION

Name: _____ Title: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: - _____

Bus Phone: X _____ Fax: _____ Email:

ACCOUNT INFORMATION EIQ Year:
Account: Company: Last EI Date:

CRITERIA EMISSIONS TOTALS
(***EE/SMSS represents combined emissions from emission events and scheduled maintenance, start-up or shutdown activities***)

Pollutant	Annual Prev(TPY)/Current	Ozone Prev(PPD)/Current	EE/SMSS Prev(TPY)/Current
PM10	0.0000 /_____	0.0000 /_____	0.0000 /_____
PB	0.0000 /_____	0.0000 /_____	0.0000 /_____
SO2	0.0000 /_____	0.0000 /_____	0.0000 /_____
NOX	0.0000 /_____	0.0000 /_____	0.0000 /_____
CO	0.0000 /_____	0.0000 /_____	0.0000 /_____
VOC	0.0000 /_____	0.0000 /_____	0.0000 /_____
PM2.5	0.0000 /_____	0.0000 /_____	0.0000 /_____

Emissions Events Certification

Pursuant to Texas Health and Safety Code 382.0215(f). I do hereby certify that 'NO Emissions Events' were experienced at this account during the Emissions Inventory Reporting Calendar year.
(Sign here if and only if you reported no emissions from emission events.)

Signature _____

Signature of Legally Responsible Party

I do hereby certify that information reported in this inventory is true, accurate, and fully represents the emissions that occurred during the Emissions Inventory Reporting Calendar year to the best of my knowledge.

_____	_____	_____
Signature	Title	Phone
_____	_____	_____
Printed Name	Date	Fax

Account: Company: EIQ Year:

FIN: EPN:
Comment:

FACILITY INFORMATION

FIN: _____ Facility Name: _____ Plant ID: _____

Comment: _____

SCC:_____ Description:
Status:____ Status Date: _____ Operating Schedule: ___hrs/day, ___days/wk, ___wks/yr
Annual Operating Hours: _____ Percentage Max Capacity: _____ Start Time: _____

Seasonal Operating Percentages (NOTE: Spring % + Summer % + Fall % + Winter % must be equal to 100%)
Spring: %_____ Summer: %_____ Fall: %_____ Winter: %_____

Group Type:

Profile:

Characteristic	Value	Unit	Characteristic	Value	Unit
BURN TYPE	-----		CYCLE	-----	
DESIGN CAPACITY			ENGINE RATING	-----	
FIRING TYPE					

EMISSION POINT INFORMATION

EPN: _____ Point Name: _____

UTM Zone: _____ Latitude: _____
UTM North Meters: _____ Longtitude: _____
UTM East Meters: _____

Profile:STACK

Characteristic	Value	Unit
DIAMETER		
HEIGHT		

Account: Company: EIQ Year:

FIN: EPN:
Comment:

EMISSION POINT INFORMATION

EPN: Point Name:

Profile:

Characteristic	Value	Unit
HORDSCHG		
MOISTURE		
TEMP		
VELOCITY		

EMISSIONS FACTORS

Criteria Pollutant	Emissions Factor	Emissions Factor Units	Reference/Source
VOC			
NOX			
CO			
SO2			
TSP			

EMISSIONS INFORMATION

Code	Cas #	Contaminant	Method	Annual(TPY)	Ozone(PPD)	EE/SMSS(TPY)
		NO EMISSIONS EVER REPORTED AT THIS PATH	-	0.0000	0.0000	0.0000

This is the last page of report

Appendix D

Emissions Inventory

Completion Checklist

Emissions Inventory Checklist

Note: The checklist is intended to be a guide for completing account review. If a checklist item was not addressed, put "TS" in the blank and provide an explanation in the technical summary.

Name: _____ **Account Number:** _____

Date: _____ **Company:** _____

General Information

1. ____ Legally responsible party signed the EI
2. ____ Legally responsible party signed the Emissions Events Certification, if required
3. ____ All of the EIQ pages were returned

Structure

4. ____ Overall structure for the account appears correct
5. ____ Facility status changes were verified and status dates were entered as needed

Non-Emissions Data

. ____ **FINs**: ☐ Erroneous or generic SCCs were replaced where possible*
☐ FIN operating schedules and seasonal operating percentages are correct*
☐ FIN group types, profiles, and characteristic information are correct*

7. ____ **CINs**: ☐ CIN structure correct ☐ CIN efficiencies present and reasonable

8. ____ **EPNs:** ☐ EPN profile and characteristic information are correct*
☐ Corrected any errors identified by the Account Level UTM Check and EPN Parameter Check Reports*

** If any of these issues remain outstanding, note it in the technical summary.*

Emissions Data

9. ____ Explain any large changes in account-wide emissions totals in the technical summary
10. ____ Thorough supporting documentation available for: ☐ all NOx sources emitting more than 250 tons
☐ all VOC sources emitting more than 50 tons
11. ____ **Determination Methodologies**: Determination methodologies are correct for:
____ ☐ Sources emitting more than 20 tons of any contaminant; and
____ ☐ VOC sources 5 tons or greater in the eleven-county nonattainment Houston/Galveston/Beaumont/Port Arthur area (regions 10 and 12)
____ ☐ NOx emissions coded with a determination methodology other than "S", if possible
12. ____ **Emissions Factors** : ☐ NOx emissions factors entered on EIQ for every NOx source east of 100° longitude
☐ Emissions factors reviewed
13. ____ **Speciation**: ☐ Single-source VOC emissions over 5/25 tons speciated to 90 percent or 0.1 tons, if possible?
____ ☐ If account-wide VOC speciation falls below 80 percent, explain the reason(s) in the technical summary.
____ ☐ Dedicated storage tanks speciated as appropriate
14. ____ **Ozone Season Emissions**: ☐ Reported emissions reflect current QA guidance
____ ☐ Any unusual ozone events documented in the technical summary

15. ___ Review each of these targeted source types, if applicable

Cooling Towers in VOC Service

☐ Each cooling tower's associated emissions determination methodology is either "A", "B", or "E"*.
☐ Account did not use the AP-42 **controlled** emissions factor to estimate emissions.

*for determination methodologies of "E", please see the QA guidance

Process Flares

☐ FIN Group data present for each account flare? Associated SCCs specific and accurate?
☐ Each flare's associated determination methodologies are **not** "S" , "E", or "O".
☐ Flare structure correct?

Equipment Leak Fugitive Areas

☐ FIN Group data present for equipment leak fugitive areas emitting 5 tons or more of VOC? Associated SCCs specific and accurate?
☐ HRVOC fugitive areas have been identified and reviewed
☐ Emissions determined in accordance with new guidance?
☐ Verify that each equipment leak fugitive area's determination methodologies are **not** "S" , "E", or "O"
☐ Non-traditional components accounted for?

Wastewater Areas in VOC Service

☐ FIN Group data present for wastewater areas? Associated SCCs specific and accurate?
☐ All wastewater areas and components identified and incorporated into structure, regardless of emissions?

Storage Tanks in VOC Service

☐ Landing losses accounted for, if applicable?
☐ External floating roof tank calculations accurately account for roof fittings?
☐ Flash losses accounted for, if applicable?
☐ All pressure tanks not hard-lined to a flare identified and incorporated into structure, regardless of emissions?

Compressor Engines: ☐ Monitoring data used to calculate emissions, if applicable?

QA Databases and References

Check each database used during review:

16. ___ EE/SMSS emissions on the EIQ reasonably match those submitted present in the EE/SMSS database
17. ___ Acid Rain Database
18. ___ 2003 TRI emissions; document in the technical summary
19. ___ NOx Banking and Trading Database
20. ___ HRVOC query

Technical Summary / Tracking

Be sure and perform the following:

21. ___ Post QA checks performed as detailed in the QA guidance?
22. ___ Document special concerns in the technical summary
23. ___ Document account corrections in the technical summary
24. ___ Verify that the Contaminant Summary Report's account totals reasonably match what the company submitted. Explain any discrepancies in the technical summary.
25. ___ Complete the technical summary
26. ___ Initial the folder and enter the account completion date in your personal tracking database