Electronic Emissions Inventory File Specifications

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The Electronic Emissions Inventory File Specifications

Introduction

The Texas Commission on Environmental Quality (TCEQ) has developed a system for electronically reporting annual air emissions inventory data to the State of Texas Air Reporting System (STARS) database. The STARS electronic reporting system uses a single pipe delimited text file for data extraction and reporting. The file created by the TCEQ and sent to the regulated community is referred to as the Extract file. The file updated by the regulated community and returned as part of the annual emission inventory submission is referred to as the Delta file. This document details the format specifications of the pipe delimited text file used by the STARS electronic reporting system. Following the specification in this document does not ensure a complete Annual Emission Inventory submission in accordance with 30 ' TAC 101.10. For more information on the Annual Emissions Inventory please refer to the Emissions Inventory Guidelines book on the Point Source Emissions Inventory web page:

   http://www.tceq.state.tx.us/implementation/air/industei/psei/psei.html

What's New

While the electronic reporting system used to report annual emissions inventory data to the TCEQ has not undergone any major procedural or specification changes since its inception a new submission process has been developed and some guidance revisions and data standard changes have occurred. The new submission process and guidance changes were made to improve the data collection process and clarify parts of the electronic emissions inventory file specifications.

New Delta File Submission Process

Beginning with the 2008 inventory year the TCEQ offered an online submission process through the State of Texas Environmental Electronic Reporting System (STEERS) web portal. This system called the Annual Emissions Inventory Report (AEIR) system allows for the submission of electronic delta files to the TCEQ. The AEIR system speeds up the process of validating and loading electronic data into the STARS database.

Beginning with the 2009 inventory the AEIR system in STEERS will be the preferred method for submitting electronic emissions inventory delta files to the TCEQ. More information on the AEIR system can be found on the STEERS website at the following link:

http://www.tceq.state.tx.us/goto/aeirhelp

Clarification to the Stars Electronic Emissions Inventory File Specifications

In past iterations of the STARS Electronic Reporting Users Guide it was incorrectly stated that 8784 could be reported for the annual operating hours in the ACCOUNT-SITE and FIN portions of the delta file. The STARS database will not accept annual operating

hours over 8760. Please update you systems and ensure that 8760 is the maximum allowed annual operating hours.

Also, the FIN profile EQUIPMENT LEAK FUGITIVES had one characteristic misspelled in the appendix. The characteristic **LDAR PROG REASON** should read as **LDAR PROGRAM REASON**. Please update your systems to correctly reflect the characteristic as **LDAR PROGRAM REASON**.

Changes to reporting ACTIVITY/MATERIAL/FACTOR

Beginning with the 2009 Emissions Inventory previously submitted data related to ACTIVITY/MATERIAL/FACTOR will be included as part of the extract file sent to the regulated community. Prior to the 2009 Emissions Inventory it had been the responsibility of the regulated community to create and add all records related to ACTIVITY/MATERIAL/FACTOR to the submitted delta file. If submission of ACTIVITY/MATERIAL/FACTOR data is not necessary for your emissions inventory then no records related to ACTIVITY/MATERIAL/FACTOR should be included in the delta file. Do not submit records with blank values and do not submit records with CRUD Type N.

The TCEQ requests that data related to ACTIVITY/MATERIAL/FACTOR be submitted according to the following guidance:

      1. ACTIVITY data should be submitted the using code for combustion activities only; Process Code COMBUSTN.
      2. MATERIAL data should be reported using the new code for Total Annual Aggregate Heat Input; Material Type TOTALHEAT.
      3. FACTOR data should be reported at a minimum for NOx emissions.

Please refer to the ACTIVITY, MATERIAL, and FACTOR portions of this document for more details.

File Structure

A single record of data within an extract or delta file is comprised of 6 fields separated by a pipe (|) character. In general the row or line of data would appear as follows:

CRUD|TABLE NAME|BUSINESS KEY|ATTRIBUTE|VALUE|UNIT

The following table describes the basic elements of each field:

FIELD	TYPE	Maximum Length	Optional/Mandatory*
CRUD Type	TEXT	1	Mandatory
TABLE NAME	TEXT	32	Mandatory
BUSINESS KEY	TEXT	100	Mandatory
ATTRIBUTE NAME	TEXT	32	Mandatory

VALUE*	TEXT OR NUMERIC	100	Mandatory
UNIT	TEXT	10	Optional

*With very few exceptions a delta file cannot contain blanks in the VALUE field. In most of this document Mandatory/Optional refers to whether or not the records must be included in the delta file. If a record for an optional piece of data is included in the delta file then the VALUE field must be filled in. Blanks in the VALUE field will result in a file that will fail the validation and upload process. The only VALUE fields that can be left blank and not cause a failure are those associated with the COMMENT attribute.

CRUD Type

CRUD is an acronym used in relational database design that stands for **C**reate/**R**ead/**U**pdate/**D**elete. The CRUD Type indicates what activity to perform on an individual record within the delta file. The valid values for CRUD Type are as follows:

U – Update; indicates a change in an existing piece of data

A – Add; indicates a new piece of equipment. Also used to report data related to emissions and ACTIVITY/MATERIAL/FACTOR.

N - No change; indicates that no update or changes are necessary for a particular piece of data.

E – Extract; Indicates a record as it was extracted from the TCEQ STARS database

Every record within the extract file will have CRUD Type E. **No records in a submitted delta file may use CRUD Type E**. If a new piece of equipment is added to the Emission Inventory (EI) the entry for this record will have CRUD Type of **A** within the delta file. All data submitted for a specific business key must have the same CRUD Type. For example, if the diameter of storage tank with Facility Identification Number (FIN) Tank-1 is updated, all items in the FIN portion of the delta file associated with FIN: TANK-1 must be submitted with CRUD Type of U (update). This is true even if a new characteristic is being submitted for this tank. Since FIN: Tank-1 currently exists in the EI the new characteristic added must have CRUD Type of U. This change is looked at as updating the existing profile for TANK-1. For the FIN, Emission Point Number (EPN), and Control Identification Number (CIN) portions of the delta file CRUD Type A should only be used for adding new equipment that does not exist in the EI, while CRUD Type N should only be used for when there are no changes to any of the data for a particular business key.

TABLE NAME

TABLE NAME refers to the name of the table that the business key, attribute, value, and unit are associated. Each table has an associated **active indicator** that determines when the table will be used and whether it will be extracted, generated by the file submitter, or used as part of both the extract and delta. The meaning of each

indicator is explained immediately following this table, which gives the names of the tables that make up the STARS electronic reporting system:

STARS TABLE NAME	ACTIVE INDICATOR
ACCOUNT-SITE	B
CONTACT	D
FIN	B
EPN	B
CIN	B
EMISSION	B
ACTIVITY	B
MATERIAL	B
FACTOR	B
SPECIAL EMISSION	U

Active Indicator

U - Indicates that the table is used only as part of the delta file. This data will not be sent by the TCEQ in the extract file. Currently Special Emissions is the only table section with active indicator U. Special Emissions are not part of the regular annual emissions inventory and only need to be submitted when specifically requested by the TCEQ as part of special hourly emissions inventory.

D - Indicates that the table is used only in the extracted file and can be omitted from the delta file. Tables with active indicator D are included in the extract file for informational purposes only. Even though this data can be omitted form the delta file if it is included as part of the delta file then all business rules described in the document must be followed.

B - Indicates that the table is used within both the extracted file and the delta file. Tables with active indicator B are included in the extract file and contain the data to be reviewed and updated by the regulated entity and returned in the delta file.

BUSINESS KEY

A **BUSINESS KEY** is either a single element or a group of elements that form a unique identifier for a piece of data. Business keys are specific to a table. For example, for an emission rate to be unique, it must be associated with a specific Regulated Entity Reference Number (RN), EI Year, FIN and EPN (PATH), and contaminant code (CONTAMCODE). The RN and EI Year are taken care of and maintained as part of the extraction process by the TCEQ and are not needed within

the business key field. The remaining items from the example above (FIN, EPN, and CONTAMCODE) form the business key for the EMISSION table. The following table summarizes the business keys for the different tables of the electronic reporting system.

Business Key Table

Table Name	Key Name	Key Sequence	Length
ACCOUNT-SITE	RN	1	11
CONTACT	ROLE TYPE	1	10
FIN	FIN LABEL	1	10
EPN	EPN LABEL	1	10
CIN	CIN LABEL	1	10
EMISSION	FIN LABEL	1	10
EMISSION	EPN LABEL	2	10
EMISSION	CONTAMCODE	3	5
ACTIVITY	FIN LABEL	1	10
ACTIVITY	PROCESS CODE	2	10
MATERIAL	FIN LABEL	1	10
MATERIAL	PROCESS CODE	2	10
MATERIAL	MATERIAL TYPE	3	10
MATERIAL	FROM DATE	4	8
FACTOR	FIN LABEL	1	10
FACTOR	PROCESS CODE	2	10
FACTOR	MATERIAL TYPE	3	10
FACTOR	FROM DATE	4	8
FACTOR	POLLUTANT CLASS	5	10
SPECIAL EMISSION	FIN LABEL	1	10
SPECIAL EMISSION	EPN LABEL	2	10
SPECIAL EMISSION	CONTAMCODE	3	5
SPECIAL EMISSION	TEST DATE	4	8
SPECIAL EMISSION	START HOUR	5	2

Business Key Table Descriptions:

Table Name - is the name of the table that the business key is associated with. Refer to page 3 for more information on table name.

Key Name - is the specific piece of data that is the key or is part of the key.

RN - is the 11-character alphanumeric identifier that identifies a site to the TCEQ.

FIN LABEL - is the 10-character alphanumeric FIN identifier used to identify emission generating units in the STARS database.

EPN LABEL - is the 10-character alphanumeric EPN identifier used to identify emission discharge points in the STARS database.

CIN LABEL - is the 10-character alphanumeric CIN identifier used to identify emission control equipment/activities in the STARS database.

ROLE TYPE - represents the role of the contact person. Only two contact role types are presently extracted: Emissions Inventory (EMISSINV) and, if provided, Consultant (CONSULTANT). These values can be found in the reference tables.

CONTAMCODE - represents the 5-digit TCEQ contaminant code for the pollutant within the specific emission or special emission record. These values can be found in the reference tables.

PROCESS CODE (PRC_CD) - is the specific process that the FIN is performing (e.g., combustion, storage, etc.). These values can be found in the reference tables. Beginning with the 2009 inventory the TCEQ requests that only the COMBUSTN process code be used.

MATERIAL TYPE (MAT_TYP) - represents the specific material being used with the FIN for the set process. These values can be found in the reference tables. Beginning with the 2009 inventory the TCEQ requests that only the TOTALHEAT material type be used.

FROM DATE - is the date that the FIN began performing the specific process on the material. The date format is YYYYMMDD.

POLUTANT CLASS (POLU_CLASS) - is the specific pollutant or group of pollutants determined by using the factor in emissions calculations (e.g., VOC, NOX, CO, PM10, etc.). These values can be found in the reference tables.

TEST DATE - is the date that the special emission rate is being submitted. The date format is YYYYMMDD.

START HOUR - is the hour that the specific hourly emission rate is being submitted. The possible values for this field are the numbers

between 1 and 24, inclusive, with 1 representing the hour from midnight to 1 am, 2 representing the hour from 1 am until 2 am and so on up to 24, which represents the hour from 11 pm until midnight.

Key Sequence - If a business key for a particular table consists of more than one element, the key sequence represents the key's order of appearance within the business key. The business key for the emission table consists of FIN, EPN and CONTAMCODE. The FIN sequence number of 1 means that it appears first within the key, the EPN sequence number of 2 signifies that it should be second within the key, and the CONTAMCODE sequence number of 3 indicates that it falls third within the key.

Length - is the size of either the key or the individual element within the key. For instance, the key for the emission table is 25 characters and uses the FIN, EPN, and CONTAMCODE. As the FIN and EPN are alpha numeric identifiers up to 10 characters in length, the FIN and EPN part size within the business key are 10 spaces each. The CONTAMCODE is always a 5 character number, so the length within the business key is 5.

ATTRIBUTE NAME

The different attribute names within the extract and delta files represent specific attributes or parameters. A cross-reference of the attributes associated with the different tables is provided in the Attribute Table on the following pages. The legend for the Attribute Table is as follows:

TABLE NAME - As stated earlier, represents the STARS extract or delta file table.

ATTRIBUTE NAME - Represents the specific STARS attribute.

DOMAIN - Represents the data type (text or numeric) allowed for the specific attribute.

LENGTH - Represents the maximum length of the data field for the attribute.

ACTIVE INDICATOR - Represents whether the specific attribute will be used only as part of the extracted file (D), as part of the delta file only (U), or as part of both the extracted and delta files (B).

If an attribute's active indicator is **D**, the attribute, corresponding data value and unit were extracted to allow the regulated community the opportunity to view the data. Data for this attribute may be sent to TCEQ as part of the delta file but it will **not** be updated by the STARS upload program.

If an attribute's active indicator is **U**, then the attribute, corresponding data value and unit are not part of the extracted file sent by TCEQ. The regulated entity will need to create the attributes and tables and return

them to TCEQ as part of the delta file. This data type will be uploaded as part of the annual electronic submission.

If an attribute's active indicator is **B**, then the attribute, corresponding data value and unit are within both the extracted and delta files and are updated as part of the annual upload into STARS.

Attribute Table

Table Name	Attribute Name	Domain	Length	Activity Indicator
ACCOUNT-SITE	LOCATION ZIP CODE	NUMERIC	5	D
ACCOUNT-SITE	UTM ZONE	NUMERIC	2	D
ACCOUNT-SITE	UTM EAST METERS	NUMERIC	9	D
ACCOUNT-SITE	UTM NORTH METERS	NUMERIC	10	D
ACCOUNT-SITE	PRIMARY SIC	NUMERIC	4	D
ACCOUNT-SITE	PRIMARY SIC NAME	TEXT	100	D
ACCOUNT-SITE	LATITUDE	NUMERIC	9	D
ACCOUNT-SITE	WEEKS PER YEAR	NUMERIC	2	B
ACCOUNT-SITE	LONGITUDE	NUMERIC	10	D
ACCOUNT-SITE	NEAR CITY	TEXT	15	D
ACCOUNT-SITE	ORGANIZATION NAME	TEXT	100	D
ACCOUNT-SITE	CRITERIA TOTALS	TEXT	1	D
ACCOUNT-SITE	SUMMER PERCENTAGE	NUMERIC	3	B
ACCOUNT-SITE	SPRING PERCENTAGE	NUMERIC	3	B
ACCOUNT-SITE	DAYS PER WEEK	NUMERIC	1	B
ACCOUNT-SITE	HOURS PER DAY	NUMERIC	2	B
ACCOUNT-SITE	SECONDARY SIC	NUMERIC	4	D
ACCOUNT-SITE	SECONDARY SIC NAME	TEXT	100	D
ACCOUNT-SITE	SITE NAME	TEXT	50	D
ACCOUNT-SITE	FALL PERCENTAGE	NUMERIC	3	B
ACCOUNT-SITE	COUNTY NAME	TEXT	35	D
ACCOUNT-SITE	REGION CODE	TEXT	10	D
ACCOUNT-SITE	OWNER OPERATOR TYPE	TEXT	10	D
ACCOUNT-SITE	TOTAL OPERATING HOURS	NUMERIC	4	B
ACCOUNT-SITE	EPA ACCOUNT NUMBER	NUMERIC	4	D
ACCOUNT-SITE	LAST EI DATE	DATE	8	D
ACCOUNT-SITE	WINTER PERCENTAGE	NUMERIC	3	B
ACCOUNT-SITE	COUNTY STATUS	TEXT	10	D
ACCOUNT-SITE	TOT NUM NONRPT EMISSION EVENTS	NUMERIC	5	B
ACCOUNT-SITE	TOT NUM NONRPT SMSS EVENTS	NUMERIC	5	B
ACCOUNT-SITE	TOT NUM RPT EMISSION EVENTS	NUMERIC	5	B
ACCOUNT-SITE	TOT NUM RPT SMSS EVENTS	NUMERIC	5	B
ACCOUNT-SITE	ANNUAL OPACITY EVENT TOTAL	NUMERIC	5	B
CONTACT	TITLE	TEXT	10	D
CONTACT	FIRST NAME	TEXT	35	D
CONTACT	MIDDLE NAME	TEXT	35	D
CONTACT	LAST NAME	TEXT	35	D
CONTACT	PREFIX	TEXT	8	D
CONTACT	SUFFIX	TEXT	8	D

Table Name	Attribute Name	Domain	Length	Activity Indicator
CONTACT	EMAIL	TEXT	50	D
CONTACT	ADDRESS1 (see footnote a)	TEXT	50	D
CONTACT	ADDRESS2 (see footnote a, b)	TEXT	50	D
CONTACT	DELIVERY POINT (see footnote a, b)	TEXT	10	D
CONTACT	CITY (see footnote a)	TEXT	35	D
CONTACT	STATE (see footnote a)	TEXT	2	D
CONTACT	ZIP (see footnote a)	TEXT	5	D
CONTACT	ZIP EXTENSION (see footnote a, b)	TEXT	4	D
CONTACT	COUNTRY CODE (see footnote a, b)	TEXT	3	D
CONTACT	FOREIGN POSTAL CODE (see footnote a, b)	TEXT	15	D
CONTACT	TERRITORY (see footnote a, b)	TEXT	35	D
CONTACT	NUMBER (see footnote c)	TEXT	10	D
CONTACT	EXTENSION (see footnote c, d)	TEXT	5	D
CONTACT	COMM COUNTRY CODE (see footnote c, d)	TEXT	3	D
FIN	PROFILE	TEXT	30	B
FIN	PLANT ID	TEXT	10	B
FIN	SUMMER PERCENTAGE	NUMERIC	3	B
FIN	FALL PERCENTAGE	NUMERIC	3	B
FIN	WINTER PERCENTAGE	NUMERIC	3	B
FIN	SCC NAME	TEXT	50	D
FIN	SCC DESCRIPTION	TEXT	50	D
FIN	COMMENT	TEXT	100	B
FIN	CHARACTERISTICS (see footnote e)	TEXT	1 - 100	B
FIN	SCC CODE	NUMERIC	10	B
FIN	ANNUAL OPERATING HOURS	NUMERIC	4	B
FIN	SPRING PERCENTAGE	NUMERIC	3	B
FIN	GROUP TYPE	TEXT	10	B
FIN	NAME	TEXT	50	B
FIN	PERMIT INDICATOR	TEXT	10	B
FIN	DAYS PER WEEK	NUMERIC	1	B
FIN	WEEKS PER YEAR	NUMERIC	2	B
FIN	HOURS PER DAY	NUMERIC	2	B
FIN	START TIME	NUMERIC	4	B
FIN	STATUS CODE	TEXT	10	B
FIN	STATUS DATE	DATE	8	B
FIN	PERCENT MAX CAPACITY	NUMERIC	4	B
EPN	UTM ZONE	NUMERIC	2	B
EPN	LONGITUDE	NUMERIC	10	B
EPN	NAME	TEXT	30	B
EPN	PROFILE	TEXT	10	B
EPN	UTM NORTH METERS	NUMERIC	10	B
EPN	LATITUDE	NUMERIC	9	B
EPN	UTM EAST METERS	NUMERIC	9	B
EPN	CHARACTERISTIC (see footnote e)	TEXT	1-100	B
CIN	ABATEMENT	NUMERIC	3	B
CIN	ABATEMENT NAME	TEXT	50	D

Table Name	Attribute Name	Domain	Length	Activity Indicator
CIN	IM SCHEDULE	TEXT	10	B
CIN	EPN LABEL	TEXT	10	B
CIN	FIN LABEL	TEXT	10	B
CIN	PERCENT TIME OFF	NUMERIC	5	B
CIN	CO EFF	NUMERIC	6	B
CIN	TOTAL OPERATING HOURS	NUMERIC	4	B
CIN	PM10 EFF	NUMERIC	6	B
CIN	TSP EFF	NUMERIC	6	B
CIN	IOC EFF	NUMERIC	6	B
CIN	SO2 EFF	NUMERIC	6	B
CIN	C1-C3 EFF	NUMERIC	6	B
CIN	C4+ EFF	NUMERIC	6	B
CIN	NH3 EFF	NUMERIC	6	B
CIN	H2S EFF	NUMERIC	6	B
CIN	NUMBER OF UNITS	NUMERIC	2	B
CIN	VOC EFF	NUMERIC	6	B
CIN	NAME	TEXT	100	B
CIN	NOX EFF	NUMERIC	6	B
EMISSION	DETERMINATION	TEXT	10	B
EMISSION	OZONE	NUMERIC	15	B
EMISSION	ANNUAL	NUMERIC	15	B
EMISSION	CONTAM NAME	TEXT	100	D
EMISSION	CAS NUMBER	TEXT	15	D
EMISSION	UPSET	NUMERIC	15	B
EMISSION	MAINTENANCE	NUMERIC	15	B
ACTIVITY	FROM DATE	DATE	8	B
ACTIVITY	TO DATE	DATE	8	B
MATERIAL	MATERIAL QUANTITY	NUMERIC	12	B
MATERIAL	TO DATE	DATE	8	B
FACTOR	FACTOR QUANTITY	NUMERIC	10	B
FACTOR	NUMERATOR UNIT	TEXT	10	B
FACTOR	DENOMINATOR UNIT	TEXT	10	B
SPECIAL EMISSION	QUANTITY	NUMERIC	12	B
SPECIAL EMISSION	REASON CODE	TEXT	10	B

Attribute Table Foot Notes

a - There are three possibilities for address types in the Contact Table: BUSINESS, HOME, and MAIL. Any combination of these can be within the extracted and/or delta file. For example, a contact may have a MAIL and BUSINESS address; MAIL and HOME addresses; etc. It is generally accepted that a contact will have at least MAIL and BUSINESS addresses. The following table contains a list of the attributes that make up the

different addresses. Certain attributes are mandatory across all address types, while others are optional and may depend on location (in or out of this country) and the make-up of the address. The mandatory attributes appear as bold text.

Attributes for ADDRESS Type = MAIL	Attributes for ADDRESS Type = BUSINESS	Attributes for ADDRESS Type = Home
MAIL ADDRESS1	**BUSINESS ADDRESS1**	**HOME ADDRESS1**
MAIL ADDRESS2	BUSINESS ADDRESS2	HOME ADDRESS2
MAIL DELIVERY POINT	BUSINESS DELIVERY POINT	HOME DELIVERY POINT
MAIL CITY	**BUSINESS CITY**	**HOME CITY**
MAIL STATE	**BUSINESS STATE**	**HOME STATE**
MAIL ZIP	**BUSINESS ZIP**	**HOME ZIP**
MAIL ZIP EXTENSION	BUSINESS ZIP EXTENSION	HOME ZIP EXTENSION
MAIL COUNTRY CODE	BUSINESS COUNTRY CODE	HOME COUNTRY CODE
MAIL FOREIGN POSTAL CODE	BUSINESS FOREIGN POSTAL CODE	HOME FOREIGN POSTAL CODE
MAIL TERRITORY	BUSINESS TERRITORY	HOME TERRITORY

Attribute Table Foot Notes Continued

b - For all address types within the Contact Table, the attributes of COUNTRY CODE, FOREIGN POSTAL CODE and TERRITORY are optional for addresses within the United States and mandatory for international addresses.

c - There are four possibilities for electronic communication types in the Contact Table: PHONE, FAX, BUSINESS, and CELL. Any combination of these can be within the extracted and/or delta file. For example, a contact may have PHONE and FAX numbers; PHONE, FAX, CELL, and BUSINESS electronic communication numbers; etc. It is generally accepted that a contact will have at least a PHONE number. The following table contains the list of attributes that make up the different electronic communication types. One attribute, NUMBER, is mandatory across all electronic communication types. The other attributes are optional and may be needed depending on location (in or out of this country) and the make-up of the specific electronic communication.

Attributes for Electronic Communication Type = Phone	Attributes for Electronic Communication Type = BUSINESS	Attributes for Electronic Communication Type = FAX	Attributes for Electronic Communication Type = CELL
PHONE NUMBER	**BUSINESS NUMBER**	**FAX NUMBER**	**CELL NUMBER**
PHONE EXTENSION	BUSINESS EXTENSION	FAX EXTENSION	CELL EXTENSION
PHONE COMM COUNTRY CODE	BUSINESS COMM COUNTRY CODE	FAX COMM COUNTRY CODE	CELL COMM COUNTRY CODE

d - The Contact Table attributes of EXTENSION and COMM COUNTRY CODE are optional for all electronic communication within the United States. For all electronic communication outside of the United States, these fields are mandatory.

e - Characteristics within the FIN and EPN Tables are listed as being 1-100 characters in length. The specific characteristics listed within a given extracted or delta file will depend on the particular FIN or EPN profile. A list of the characteristics associated with the different profiles is included in the appendix to this document.

Unless otherwise noted all attributes are mandatory and must be included in the delta file with valid values entered.

VALUE

The VALUE section of an extract or delta file record will contain the specific data value for the attribute. Values can be text or numeric depending on the domain type for the specific attribute. The field definitions in this document will specify if the VALUE is text or numeric, the maximum length of the value, and if it is mandatory or optional. Some attributes require that one of a given set of allowed values be entered in the value field. These values can be found in the reference tables and the appendix to this document. Examples of possible value entries are shown in the following table.

ATTRIBUTE	VALUE
HOURS PER DAY	12
EMAIL	TCEQ @TCEQ.state.tx.us
FIRST NAME	JOSEPH

ATTRIBUTE	VALUE
DETERMINATION	A
ANNUAL	1047.5891
START HOUR	15
TO DATE	20011215

With very few exceptions a delta file cannot contain blanks in the VALUE field. In most of this document Mandatory/Optional refers to whether or not the data must be included in the delta file. If an optional piece of data is included in the delta file then the VALUE field must be filled in. Blanks in the VALUE field will result in a file that will fail the validation and upload process. The only VALUE fields that can be left blank and not cause a failure are those associated with the COMMENT attribute.

UNIT

The UNIT section of an extract or delta file record will contain a unit of measure for the attributes value. This UNIT further details the attribute's value. A unit is not needed for every attribute value. The appendix of this document contains tables that indicate which attributes units may apply to. The TCEQ has assigned units to all of the values that require a unit of measure; this makes submittal of a UNIT in the delta file optional. Units different then those specified in the appendix or reference tables may not be used. If the units for a particular value are given as feet substituting meters in the delta file will not result in meters entered into STARS.

Submission & Upload Process

One delta file should be submitted for each regulated entity. The delta file will be validated, once the file passes all validation checks the file will be uploaded into the STARS system. The information that may be contained in the delta file is divided into ten sections corresponding to the ten tables shown earlier. Each section is discussed below. The representations are presented in tabular format with a sample delta file format following each section's table. Beginning with the 2008 inventory the regulated community has the option of submitting the delta file through the State of Texas Environmental Electronic Reporting System (STEERS). For more information please refer to the Annual Emissions Inventory Report (AEIR) program in STEERS.

Unless otherwise noted data for all attributes is mandatory. However, inclusion of optional data in the delta file requires that all business rules specified be followed. Optional data can not be included in the delta with a blank value field.

1. ACCOUNT-SITE

Table Name: ACCOUNT-SITE
Business Key: The RN (e.g. RN999999999)

The ACCOUNT-SITE table contains information on the overall ACCOUNT-SITE. The attributes within the ACCOUNT-SITE table includes twelve attributes that should be updated yearly. These attributes are listed below. The following table illustrates the attributes for the ACCOUNT-SITE table with example values.

CRUD Type	Table	Business Key	Attribute	Value	Unit
U	ACCOUNT-SITE	RN999999999	HOURS PER DAY	12	
U	ACCOUNT-SITE	RN999999999	DAYS PER WEEK	7	
U	ACCOUNT-SITE	RN999999999	WEEKS PER YEAR	52	
U	ACCOUNT-SITE	RN999999999	SPRING PERCENTAGE	25	
U	ACCOUNT-SITE	RN999999999	FALL PERCENTAGE	25	
U	ACCOUNT-SITE	RN999999999	SUMMER PERCENTAGE	30	
U	ACCOUNT-SITE	RN999999999	WINTER PERCENTAGE	20	
U	ACCOUNT-SITE	RN999999999	TOTAL OPERATING HOURS	4867	
U	ACCOUNT-SITE	RN999999999	TOT NUM NONRPT EMISSION EVENTS	6	
U	ACCOUNT-SITE	RN999999999	TOT NUM NONRPT SMSS EVENTS	2	
U	ACCOUNT-SITE	RN999999999	TOT NUM RPT EMISSION EVENTS	1	
U	ACCOUNT-SITE	RN999999999	TOT NUM RPT SMSS EVENTS	7	
U	ACCOUNT-SITE	RN999999999	ANNUAL OPACITY EVNET TOTAL	5	

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
U|ACCOUNT-SITE|RN999999999|HOURS PER DAY|12|
U|ACCOUNT-SITE|RN999999999|DAYS PER WEEK|7|
U|ACCOUNT-SITE|RN999999999|WEEKS PER YEAR|52|
U|ACCOUNT-SITE|RN999999999|SPRING PERCENTAGE|25|
U|ACCOUNT-SITE|RN999999999|FALL PERCENTAGE|25|
U|ACCOUNT-SITE|RN999999999|SUMMER PERCENTAGE|30|
U|ACCOUNT-SITE|RN999999999|WINTER PERCENTAGE|20|
U|ACCOUNT-SITE|RN999999999|TOTAL OPERATING HOURS|4867|
U|ACCOUNT-SITE|RN999999999|TOT NUM NONRPT EMISSION EVENTS|6|
U|ACCOUNT-SITE|RN999999999|TOT NUM NONRPT SMSS EVENTS|2|
U|ACCOUNT-SITE|RN999999999|TOT NUM RPT EMISSION EVENTS|1|
U|ACCOUNT-SITE|RN999999999|TOT NUM RPT SMSS EVENTS|7|
U|ACCOUNT-SITE|RN999999999|ANNUAL OPACITY EVENT TOTAL|5|
```

```
U|ACCOUNT-SITE| RN999999999|HOURS PER DAY|12| ■U|ACCOUNT-SITE|RN999999999|DAYS PER
WEEK|7| ■U|ACCOUNT-SITE|RN999999999|WEEKS PER YEAR|52| ■U|ACCOUNT-
SITE|RN999999999|SPRING PERCENTAGE|25| ■U|ACCOUNT-SITE|RN999999999|FALL
PERCENTAGE|25| ■U|ACCOUNT-SITE|RN999999999|SUMMER PERCENTAGE|30| ■ U|ACCOUNT-
SITE|RN999999999|WINTER PERCENTAGE|20| ■U|ACCOUNT-SITE|RN999999999|TOTAL OPERATING
HOURS|4867| ■U|ACCOUNT-SITE|RN999999999|TOT NUM NONRPT EMISSION EVENTS|6|
■U|ACCOUNT-SITE|RN999999999|TOT NUM NONRPT SMSS EVENTS|2| ■U|ACCOUNT-
SITE|RN999999999|TOT NUM RPT EMISSION EVENTS|1| ■U|ACCOUNT-SITE|RN999999999|TOT
NUM RPT SMSS EVENTS|7| ■U|ACCOUNT-SITE|RN999999999|ANNUAL OPACITY EVENT TOTAL|5| ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

Business Rules for the ACCOUNT_SITE Table

HOURS PER DAY - must be a whole number between 1 and 24.

DAYS PER WEEK - must be a whole number between 1 and 7.

WEEKS PER YEAR - must be a whole number between 1 and 52.

WINTER PERCENTAGE - may be a number between 1 and 100; represents
actual percentage of operation that occurred in the combined months of
December, January, and February of the same calendar year.

SPRING PERCENTAGE - may be a number between 1 and 100; represents
actual percentage of operation that occurred in the combined months of
March, April, and May.

SUMMER PERCENTAGE - may be a whole number between 1 and 100;
represents actual percentage of operation that occurred in the combined
months of June, July, and August.

FALL PECENTAGE - may be a whole number between 1 and 100; represents
actual percentage of operation that occurred in the combined months of
September, October, and November.

Note: While each seasonal percentage can be between 1 and 100 the sum of
the Spring, Summer, Fall, and Winter Percentages must equal 100.

TOTAL OPERATING HOURS - is the total hours the entire site operated
during the calendar year. For any year, including leap years the Total
Operating Hours must be a whole number between 1 and 8760.

TOT NUM NONRPT EMISSION EVENTS - represents the site wide
quantitative total number or non-reportable emission events that occurred
during the calendar year. Valid values for this attribute are whole numbers
from 0-99999.

TOT NUM NONRPT SMSS EVENTS - is the site wide quantitative total
number or non-reportable scheduled maintenance, start-up, and shutdown

events that occurred during the calendar year. Valid values for this attribute are whole numbers from 0-99999.

TOT NUM RPT EMISSION EVENTS - is the site wide quantitative total number or reportable emission events that occurred during the calendar year. Valid values for this attribute are whole numbers from 0-99999.

TOT NUM RPT SMSS EVENTS - is the site wide quantitative total number or reportable scheduled maintenance, start-up, and shutdown events that occurred during the calendar year. Valid values for this attribute are whole numbers from 0-99999.

ANNUAL OPACITY EVENT TOTAL - is the site wide quantitative total number of Excess Opacity emission events which occurred during the calendar year for which the inventory is being reported. Valid values for this attribute are whole numbers from 0-99999.

2. CONTACT

The CONTACT table is no longer required to be submitted as part of the delta file. This portion will remain in the extract file to relay the current account contact information back to the regulated entity. Changes to contact information may be submitted through the AEIR system in STEERS or on the report sent with the official inventory request. Even though the CONTACT portion of the delta file is optional if CONTACT records are included in the delta file all business rules must be followed or the delta file could fail validation and upload.

Table Name: CONTACT
Business Key: ROLE TYPE (CONSULTANT or EMISSINV for Emissions Inventory)

While submittal of this section in the delta is not mandatory if it is included the data must conform to all format specifications and business rules. The following table illustrates the attributes for the CONTACT table with example values:

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
U	CONTACT	EMISSINV	FIRST NAME	John	
U	CONTACT	EMISSINV	LAST NAME	Doe	
U	CONTACT	EMISSINV	MIDDLE NAME	G.	
U	CONTACT	EMISSINV	PREFIX	Mr.	
U	CONTACT	EMISSINV	SUFFIX	Jr.	
U	CONTACT	EMISSINV	EMAIL	johngdoe@hotmail.com	

U	CONTACT	EMISSINV	TITLE	EHS MANAGER	
U	CONTACT	EMISSINV	BUSINESS NUMBER	5551234567	
U	CONTACT	EMISSINV	BUSINESS COMM COUNTRY CODE		
U	CONTACT	EMISSINV	BUSINESS EXTENSION	1234	
U	CONTACT	EMISSINV	FAX NUMBER	5559876543	
U	CONTACT	EMISSINV	FAX EXTENSION	1235	
U	CONTACT	EMISSINV	CELL NUMBER	5559876542	
U	CONTACT	EMISSINV	CELL COMM COUNTRY CODE		
U	CONTACT	EMISSINV	CELL EXTENSION		
U	CONTACT	EMISSINV	BUSINESS ADDRESS1	3707 Mark Drive	
U	CONTACT	EMISSINV	BUSINESS ADDRESS2		
U	CONTACT	EMISSINV	BUSINESS CITY	AUSTIN	
U	CONTACT	EMISSINV	BUSINESS STATE	TX	
U	CONTACT	EMISSINV	BUSINESS ZIP	78753	
U	CONTACT	EMISSINV	BUSINESS ZIP EXTENSION	1000	

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
U|CONTACT|EMISSINV  |BUSINESS ZIP|78753|
U|CONTACT|EMISSINV  |BUSINESS ADDRESS1|3707 Mark Drive|
U|CONTACT|EMISSINV  |BUSINESS CITY|AUSTIN|
U|CONTACT|EMISSINV  |BUSINESS STATE|TX|
U|CONTACT|EMISSINV  |FIRST NAME|John|
U|CONTACT|EMISSINV  |LAST NAME|Doe|
U|CONTACT|EMISSINV  |TITLE|EHS MANAGER|
U|CONTACT|EMISSINV  |BUSINESS 1 NUMBER|5551234567|

U|CONTACT|EMISSINV  |BUSINESS ZIP|78753| ■U|CONTACT|EMISSINV  |BUSINESS
ADDRESS1|3707 Mark Drive| ■U|CONTACT|EMISSINV  |BUSINESS CITY|AUSTIN|
■U|CONTACT|EMISSINV  |BUSINESS STATE|TX| ■U|CONTACT|EMISSINV  |FIRST NAME|John|
■U|CONTACT|EMISSINV  |LAST NAME|Doe| ■U|CONTACT|EMISSINV  |TITLE|EHS MANAGER|
■U|CONTACT|EMISSINV  |BUSINESS 1 NUMBER|5551234567| ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

Business Rules for the CONTACT Table

FIRST NAME - is the first name of the contact. This field must be text no longer than 35 characters.

LAST NAME - is the last name of the contact. This field must be text no longer than 35 characters.

MIDDLE NAME - is either the middle name or initial of the contact. This field must be text no longer than 35 characters.

PREFIX - is the standard prefix for the contact. This field must be text no longer than 8 characters. (Examples: Mr., Mrs., Ms., Dr., etc.)

SUFFIX - is the standard suffix for the contact. This field must be text no longer than 8 characters. (Examples: PhD, PE, MD, etc.)

EMAIL – is the electronic mail address for the contact. This field must be text no longer than 50 characters. This will ONLY be part of the delta file and will not be sent as part of the extracted file.

PHONE* **NUMBER** – is telephone number, consisting of a 3-digit area code and 7-digit telephone number with no punctuation. (e.g., 5122390000)). This text field must be no longer than 10 characters

PHONE* **EXTENSION** - is the direct extension for the contact if the call must first go through a main switchboard. This field must be text no longer than 5 characters.

PHONE* **COMM COUNTRY CODE -** is the country code for telephone number outside the United States. This field must be text and not longer than 3 characters.

*BUSINESS, CELL, or FAX must be substituted in place of PHONE.

BUSINESS **CITY** - is the city that appears as part of the address. This field must be text no longer than 35 characters.

BUSINESS **STATE** - is the standard postal abbreviation for the state that appears as part of the address. This field must be 2 characters.

BUSINESS **ZIP** - is the postal zip code for the city in the address. This field must be text no longer than 5 characters.

BUSINESS **ZIP EXTENSION** - is the mail code extension of the postal code associated with the address. This field must be text no longer than 4 characters.

BUSINESS **ADDRESS2 -** is the second line of the address, this field could contain a PO BOX (if both a street and PO BOX are available), a SUITE or BUILDING number, or any other distinguishing second line code. This field must be text no longer than 50 characters.

BUSINESS **DELIVERY POINT** - isthe contact's mail code (MC-xx), mail stop or delivery point. This field must be text no longer than 10 characters.

BUSINESS **COUNTRY CODE** - is the code associated with the country where address is located. This field must be text no longer than 3 characters.

BUSINESS **FOREIGN POSTAL CODE** - is the postal code associated with addresses outside the United States. This field must be text no longer than 15 characters.

BUSINESS **TERRITORY** - is the territory outside the United States where the address is located. This field must be text no longer than 25 characters.

3. FIN (Facility Identification Number)

Table Name: FIN
Business Key: FIN LABEL (10 character alphanumeric identifier)

The FIN portion of the extract and delta files contains the information for the FINs (emission generators) at the site. The FIN LABEL represents the 10-character alphanumeric identifier and is the business key for the FIN portion of the extract and delta file.

The extract file contains information for all FINs associated to the given RN regardless of the FIN Status. This means that the files will include all Active (A), Idle (I) FINs AND those with a status of Permanently Shutdown (S), Ownership Transferred (O), Demolished (D), or Permitted but not built (N). This is done to alleviate the problem of new FINs submitted with labels matching existing FIN labels.

All FINs sent in the extracted file must be included in the delta file. FINs with no data changes may be submitted with CRUD Type N (no change). The delta file will be compared against the extracted file to ensure that all FINs are returned in the delta file.

All information in the FIN portion of the extracted file will have a CRUD Type of E. There must be no E's in the delta file. Possible CRUD Types for FIN data are U (update), N (no change), or A (add).

All information for a particular FIN must have the same CRUD Type. For example, if the value for one attribute for a particular FIN is updated then all data submitted for that FIN will need to use CRUD Type U. If none of the data for a particular FIN needs to be updated then all data can be submitted with CRUD Type N.

The following table illustrates some of the possible attributes for the FIN table with example values. Here an update is being submitted for FIN BOILER-1, an external combustion boiler, and a new FIN (TANK138) is being added.

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
U	FIN	BOILER-1	NAME	BENZENE UNIT BOILER 1	
U	FIN	BOILER-1	GROUP TYPE	COMBUSTN	
U	FIN	BOILER-1	PROFILE	BOILER	
U	FIN	BOILER-1	HOURS PER DAY	18	
U	FIN	BOILER-1	DAYS PER WEEK	6	
U	FIN	BOILER-1	WEEKS PER YEAR	36	
U	FIN	BOILER-1	SPRING PERCENTAGE	20	
U	FIN	BOILER-1	SUMMER PERCENTAGE	12	
U	FIN	BOILER-1	FALL PERCENTAGE	20	
U	FIN	BOILER-1	WINTER PERCENTAGE	48	
U	FIN	BOILER-1	ANNUAL OPERATING HOURS	3888	
U	FIN	BOILER-1	PERCENT MAX CAPACITY	44.4	
U	FIN	BOILER-1	STATUS CODE	A	
U	FIN	BOILER-1	SCC CODE	10200202	
U	FIN	BOILER-1	FIRING TYPE	TN	
U	FIN	BOILER-1	DESIGN CAPACITY	568.94	MMBTU/HR
A	FIN	TANK138	NAME	GASOLINE STORAGE TANK 138	
A	FIN	TANK138	GROUP TYPE	TANKS	
A	FIN	TANK138	PROFILE	INTERNAL FLOATING ROOF	
A	FIN	TANK138	HOURS PER DAY	16	
A	FIN	TANK138	DAYS PER WEEK	7	
A	FIN	TANK138	WEEKS PER YEAR	52	
A	FIN	TANK138	SPRING PERCENTAGE	25	
A	FIN	TANK138	SUMMER PERCENTAGE	25	
A	FIN	TANK138	FALL PERCENTAGE	25	
A	FIN	TANK138	WINTER PERCENTAGE	25	
A	FIN	TANK138	ANNUAL OPERATING HOURS	8760	

A	FIN	TANK138	START TIME	0700	
A	FIN	TANK138	PERCENT MAX CAPACITY	99.9	
A	FIN	TANK138	STATUS CODE	A	
A	FIN	TANK138	STATUS DATE	20010315	
A	FIN	TANK138	SCC CODE	40301101	
A	FIN	TANK138	PERMIT INDICATOR	G	
A	FIN	TANK138	DIAMETER	45.75	FEET
A	FIN	TANK138	SHELL COLOR	AS	
A	FIN	TANK138	ROOF COLOR	WH	
A	FIN	TANK138	PAINT COND	G	
A	FIN	TANK138	SHLL CONST	W	
A	FIN	TANK138	PRIMARY SEAL	MS	
A	FIN	TANK138	SECONDARY SEAL	RM	
A	FIN	TANK138	DECK CONST	P	
A	FIN	TANK138	DECK FIT CATEGORY	D	
A	FIN	TANK138	DECK SEAM LENGTH	6	FEET
A	FIN	TANK138	DECK SEAM TYPE	5 X 12 FT	
A	FIN	TANK138	DECK TYPE	W	
A	FIN	TANK138	FILL MTHD	B	
A	FIN	TANK138	NO OF COLUMNS	15	
A	FIN	TANK138	HEIGHT	60	FEET
A	FIN	TANK138	STORE CAPACITY	2948	MGALLONS

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
U|FIN|BOILER-1  |NAME|BENZENE UNIT BOILER 1|
U|FIN|BOILER-1  |GROUP TYPE|COMBUSTN|
U|FIN|BOILER-1  |PROFILE|BOILER|
U|FIN|BOILER-1  |HOURS PER DAY|18|
U|FIN|BOILER-1  |DAYS PER WEEK|6|
U|FIN|BOILER-1  |WEEKS PER YEAR|36|
U|FIN|BOILER-1  |SPRING PERCENTAGE|20|
U|FIN|BOILER-1  |SUMMER PERCENTAGE|12|
U|FIN|BOILER-1  |FALL  PERCENTAGE|20|
U|FIN|BOILER-1  |WINTER PERCENTAGE|48|
U|FIN|BOILER-1  |ANNUAL OPERATING HOURS|3888|
U|FIN|BOILER-1  |PERCENT MAX CAPACITY|44.4|
U|FIN|BOILER-1  |STATUS CODE|A|
U|FIN|BOILER-1  |SCC CODE|10200202|
U|FIN|BOILER-1  |FIRING TYPE|TN|
```

```
U|FIN|BOILER-1  |DESIGN CAPACITY|568.94|MMBTU/HR
A|FIN|TANK138   |NAME|GASOLINE STORAGE TANK 138|
A|FIN|TANK138   |GROUP TYPE|TANKS|
A|FIN|TANK138   |PROFILE|INTERNAL FLOATING ROOF|
A|FIN|TANK138   |HOURS PER DAY|16|
A|FIN|TANK138   |DAYS PER WEEK|7|
A|FIN|TANK138   |WEEKS PER YEAR|52|
A|FIN|TANK138   |SPRING PERCENTAGE|25|
A|FIN|TANK138   |SUMMER PERCENTAGE|25|
A|FIN|TANK138   |FALL PERCENTAGE|25|
A|FIN|TANK138   |WINTER PERCENTAGE|25|
A|FIN|TANK138   |ANNUAL OPERATING HOURS|8760|
A|FIN|TANK138   |START TIME|0700|
A|FIN|TANK138   |PERCENT MAX CAPACITY|99.9|
A|FIN|TANK138   |STATUS CODE|A|
A|FIN|TANK138   |STATUS DATE|20090315|
A|FIN|TANK138   |SCC CODE|40301101|
A|FIN|TANK138   |PERMIT INDICATOR|G|
A|FIN|TANK138   |DIAMETER|45.75|FEET
A|FIN|TANK138   |SHELL COLOR|AS|
A|FIN|TANK138   |ROOF COLOR|WH|
A|FIN|TANK138   |PAINT COND|G|
A|FIN|TANK138   |SHLL CONST|W|
A|FIN|TANK138   |PRIMARY SEAL|MS|
A|FIN|TANK138   |SECONDARY SEAL|RM|
A|FIN|TANK138   |DECK CONST|P|
A|FIN|TANK138   |DECK FIT CATEGORY|D|
A|FIN|TANK138   |DECK SEAM LENGTH|6|FEET
A|FIN|TANK138   |DECK SEAM TYPE|5 X 12|FT
A|FIN|TANK138   |DECK TYPE|W|
A|FIN|TANK138   |FILL MTHD|B|
A|FIN|TANK138   |NO OF COLUMNS|15|
A|FIN|TANK138   |HEIGHT|60|FEET
A|FIN|TANK138   |STORE CAPACITY|2948|MGALLONS

U|FIN|BOILER-1  |NAME|BENZENE UNIT BOILER 1|■U|FIN|BOILER-1  |GROUP TYPE|COMBUSTN|
U|FIN|BOILER-1  |PROFILE|BOILER|■U|FIN|BOILER-1  |HOURS PER DAY|18|■U|FIN|BOILER-
1  |DAYS PER WEEK   6|■U|FIN|BOILER-1  |WEEKS PER YEAR   36| ■U|FIN|BOILER-1
|SPRING PERCENTAGE|20| ■U|FIN|BOILER-1  |SUMMER PERCENTAGE|12| ■U|FIN|BOILER-1
|FALL  PERCENTAGE|20| ■U|FIN|BOILER-1  |WINTER PERCENTAGE|48| ■U|FIN|BOILER-1
|ANNUAL OPERATING HOURS|3888| ■U|FIN|BOILER-1  |PERCENT MAX CAPACITY|44.4|
■U|FIN|BOILER-1  |STATUS CODE|A| ■U|FIN|BOILER-1  |SCC CODE|10200202|
■U|FIN|BOILER-1  |FIRING TYPE|TN| ■U|FIN|BOILER-1  |DESIGN CAPACITY|568.94|MMBTU/HR
■A|FIN|TANK138   |NAME|GASOLINE STORAGE TANK 138| ■A|FIN|TANK138   |GROUP
TYPE|TANKS|■A|FIN|TANK138   |PROFILE|INTERNAL FLOATING ROOF| ■A|FIN|TANK138
|HOURS PER DAY|16|■A|FIN|TANK138   |DAYS PER WEEK|7|■A|FIN|TANK138   |WEEKS PER
YEAR|52|■A|FIN|TANK138   |SPRING PERCENTAGE|25|■A|FIN|TANK138   |SUMMER
PERCENTAGE|25|■A|FIN|TANK138   |FALL PERCENTAGE|25|■A|FIN|TANK138   |WINTER
PERCENTAGE|25|■A|FIN|TANK138   |ANNUAL OPERATING HOURS|8760|■A|FIN|TANK138
|START TIME|0700| ■A|FIN|TANK138   |PERCENT MAX CAPACITY|99.9|■A|FIN|TANK138
|STATUS CODE|A| A|FIN|TANK138   |STATUS DATE|20090315|■A|FIN|TANK138   |SCC
CODE|40301101|■A|FIN|TANK138   |PERMIT INDICATOR|G|■A|FIN|TANK138
|DIAMETER|45.75|FEET ■A|FIN|TANK138   |SHELL COLOR|AS|■A|FIN|TANK138   |ROOF
COLOR|WH| ■A|FIN|TANK138   |PAINT COND|G|■A|FIN|TANK138   |SHLL CONST|W|
■A|FIN|TANK138   |PRIMARY SEAL|MS|■A|FIN|TANK138   |SECONDARY SEAL|RM|
■A|FIN|TANK138   |DECK CONST|P|■A|FIN|TANK138   |DECK FIT CATEGORY|D|
■A|FIN|TANK138   |DECK SEAM LENGTH|6|FEET ■A|FIN|TANK138   |DECK SEAM TYPE|5 X
12|FT ■A|FIN|TANK138   |DECK TYPE|W| ■A|FIN|TANK138   |FILL MTHD|B| ■A|FIN|TANK138
|NO OF COLUMNS|15|■A|FIN|TANK138   |HEIGHT|60|FEET ■A|FIN|TANK138   |STORE
CAPACITY|2948|MGALLONS ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

Business Rules for the FIN Table:

HOURS PER DAY - is the actual hours per day the FIN operated.   This field must be a whole number between 1 and 24.

DAYS PER WEEK - is the actual days per week the FIN operated. This field must be a whole number between 1 and 7.

WEEKS PER YEAR - is the actual weeks per year the FIN operated. This field must be a whole number between 1 and 52.

SUMMER PERCENTAGE - is the percentage of total yearly operation that occurred during the months of June, July, and August. This field must be a whole number between 1 and 100.

SPRING PERCENTAGE - is the percentage of total yearly operation that occurred during the months of March, April, and May. This field must be a whole number between 1 and 100.

FALL PERCENTAGE - is the percentage of total yearly operation that occurred during the months of September, October, and November. This field must be a whole number between 1 and 100.

WINTER PERCENTAGE - is the percentage of total yearly operation that occurred during the months of December, January, and February of the same calendar year. This field must be a whole number between 1 and 100.

While each seasonal percentage can be between 1 and 100 the sum of the Spring, Summer, Fall, and Winter Percentages must equal 100.

ANNUAL OPERATING HOURS - is the total number of hours the FIN operated during the calendar year. This field must be a whole number between 1 and 8760. The ANNUAL OPERATING HOURS reported for a FIN can not exceed the annual operating hours reported in the ACCOUNT-SITE table. The value reported for the annual operating hours can not exceed 8760 due to database restrictions.

PERCENT MAX CAPACITY - is the percent of the maximum potential operating capacity experienced by the FIN during the inventory year. This field must be a whole number between 1 and 100.

GROUP TYPE - is the group type that the FIN belongs. This field must be text and represented by one of the group type codes found in the reference tables or the appendix to this document.

PROFILE - is a delineation of the FIN Group and further describes the type of FIN. This field must be text and represented by one of the profile type codes found in the reference tables or the appendix to this document.

NAME - is the company-assigned name for the FIN. This field must be text and no longer than 50 characters.

START TIME - is the time of day the FIN begins operating. This field is numeric and can be no longer than 4 digits. The representation of START TIME

is based on a 24 hour clock. Examples of the correct START TIME representation are 0400 for 4 A.M., 2330 for 11:30 P.M., and 0730 for 7:30 A.M.

CHARACTERISTICS - is the different characteristic details for the FIN. Each FIN will have a set of CHARACTERISTICS. A breakdown of the characteristics assigned to the different profiles can be seen in the appendix to this document. Each CHARACTERISTIC must be given a separate line in the delta file. Some Characteristics have specific allowed values. Examples of allowed values are "WH" for white shell or roof color; and "G" or "P" for paint condition of good or poor respectively. The allowed values can be found in the reference tables or the appendix to this document.

PLANT ID (optional) - is the industry assigned identifier for the unit or plant where the FIN is located. This field is an alphanumeric field with a maximum length of ten characters.

SCC CODE - is the Environmental Protection Agency (EPA) Source Classification Code (SCC) for the particular FIN. This code may represent the process performed by the FIN, the material processed and the size of the FIN. This field is numeric and no longer than 10 digits. The current SCC values are 8 digits but we are allowing for a possible change by EPA to lengthen SCC to 10 digits. Valid SCC codes can be found in the reference tables.

SCC NAME (optional) - is the detailed description for the assigned SCC. The SCC Name has an active indicator of "D" (down only). This signifies that it will only be extracted and sent to the companies. **SCC NAME does not need to part of the delta file**.

STATUS CODE - is the FIN operating status during the reporting year that the inventory is being submitted. If the FIN operated even one day during the year, then the status must be "active". This field must be text and no longer than 10 characters. The current list of available FIN status codes are as follows, they may also be found in the reference tables:

CODE	**REPRESENTS**
A	ACTIVE
I	IDLE (did not operate in the current inventory year but may return to service later)
S	Permanently Shutdown and will no longer operate
D	Demolished, removed from site
N	Permitted, but not built
O	Ownership Transferred

STATUS DATE - is the date that a FIN status became effective. Status Date is mandatory for a change in status. The STATUS DATE will not be extracted for a status code of A (active) or I (idle). If a status code change is submitted a status date must be submitted in the format YYYYMMDD.

COMMENT (optional) - is a field where a comment can be submitted for the FIN. This comment field must be text and no longer than 100 characters.

PERMIT INDICATOR (optional) - indicates whether the FIN is operated under provisions in a permit, standard exemption (Permit by Rule) or whether the FIN was submitted as part of the grand fathered source registration. Values for this field must be text within a value not to exceed 10 characters. The current list of available Permit Type codes is, they may also be found in the reference tables:

CODE	**REPRESENTS**
E	Generator operating under a standard exemption (Permit by Rule)
G	Generator operating as a registered Grand Father source
P	Generator operating as a permitted source under a New Source Review Permit
O	Other

4. EPN (Emission Point Number)

Table Name: EPN
Business Key: EPN LABEL (10 character alphanumeric identifier)

The EPN portion of the extract and delta files contains information on the EPNs (emission discharge points) at the site. The EPN LABEL represents the 10-character alphanumeric identifier and is the business key for the EPN portion of the extract and delta files.

All EPNs sent in the extracted file must be included in the delta file. EPNs with no data changes may be submitted with CRUD Type N (no change). The delta file will be compared against the extracted file to ensure that all EPNs are returned in the delta file.

All information in the EPN portion of the extracted file will have a CRUD Type of E. There must be no E's in the delta file. Possible CRUD Types for EPN data are U (update), N (no change), or A (add).

All information for a particular EPN must have the same CRUD Type. For example, if the value for one attribute for a particular EPN is updated then all data submitted for that EPN will need to use CRUD Type U. If none of the data for a particular EPN needs to be updated then all data can be submitted with CRUD Type N.

The following table illustrates some of the possible attributes for the EPN table with example values. Here an update is being submitted for EPN BOILER-1, an external combustion boiler stack, and a new EPN (TANK138) is being added.

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
U	EPN	BOILER-1	NAME	BENZENE UNIT BOILER 1	
U	EPN	BOILER-1	PROFILE	STACK	
U	EPN	BOILER-1	UTM ZONE	15	
U	EPN	BOILER-1	UTM EAST METERS	487961	
U	EPN	BOILER-1	UTM NORTH METERS	9367241	
U	EPN	BOILER-1	DIAMETER	3.78	FEET
U	EPN	BOILER-1	HEIGHT	15	FEET
U	EPN	BOILER-1	VELOCITY	2.4	FT/SEC
U	EPN	BOILER-1	HORDSCHG	N	
U	EPN	BOILER-1	TEMP	420	DEG F
A	EPN	TANK138	NAME	GASOLINE STORAGE TANK 138	
A	EPN	TANK138	PROFILE	STACK	
A	EPN	TANK138	LATITUDE	302469.22	
A	EPN	TANK138	LONGITUDE	0942657.39	
A	EPN	TANK138	DIAMETER	3.0	FEET
A	EPN	TANK138	HEIGHT	63	FEET
A	EPN	TANK138	VELOCITY	0.01	FT/SEC
A	EPN	TANK138	TEMP	85	DEG F
A	EPN	TANK138	HORDSCHG	N	

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
U|EPN|BOILER-1  |NAME|BENZENE UNIT BOILER 1|
U|EPN|BOILER-1  |PROFILE|STACK|
U|EPN|BOILER-1  |UTM ZONE|15|
U|EPN|BOILER-1  |UTM EAST METERS|487961|
U|EPN|BOILER-1  |UTM NORTH METERS|9367241|
U|EPN|BOILER-1  |DIAMETER|3.78|FEET
U|EPN|BOILER-1  |HEIGHT|15|FEET
U|EPN|BOILER-1  |VELOCITY|2.4|FT/SEC
U|EPN|BOILER-1  |HORDSCHG|N|
U|EPN|BOILER-1  |TEMP|420DEG|F
A|EPN|TANK138   |NAME|GASOLINE STORAGE TANK 138|
A|EPN|TANK138   |PROFILE|STACK|
A|EPN|TANK138   |LATITUDE|302469.22|
A|EPN|TANK138   |LONGITUDE|0942657.39|
```

```
A|EPN|TANK138    |DIAMETER|3.0|FEET
A|EPN|TANK138    |HEIGHT|63|FEET
A|EPN|TANK138    |VELOCITY|0.01|FT/SEC
A|EPN|TANK138    |TEMP|85|DEG F
A|EPN|TANK138    |HORDSCHG|N|


U|EPN|BOILER-1   |NAME|BENZENE UNIT BOILER 1| ■U|EPN|BOILER-1   |PROFILE|STACK| ■
U|EPN|BOILER-1   |UTM ZONE|15| ■U|EPN|BOILER-1   |UTM EAST METERS|487961|
■U|EPN|BOILER-1   |UTM NORTH METERS|9367241| ■U|EPN|BOILER-1   |DIAMETER|3.78|FEET ■
U|EPN|BOILER-1   |HEIGHT|15|FEET ■U|EPN|BOILER-1   |VELOCITY|2.4|FT/SEC
■U|EPN|BOILER-1   |HORDSCHG|N| ■U|EPN|BOILER-1   |TEMP|420DEG|F ■A|EPN|TANK138
|NAME|GASOLINE STORAGE TANK 138| ■A|EPN|TANK138    |PROFILE|STACK| ■A|EPN|TANK138
|LATITUDE|302469.22| ■ A|EPN|TANK138    |LONGITUDE|0942657.39| ■A|EPN|TANK138
|DIAMETER|3.0|FEET ■A|EPN|TANK138    |HEIGHT|63|FEET ■A|EPN|TANK138
|VELOCITY|0.01|FT/SEC ■A|EPN|TANK138    |TEMP|85|DEG F ■A|EPN|TANK138
|HORDSCHG|N| ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

Business Rules for the EPN Tables:

> **NAME** represents the company-assigned name for the EPN. This field must be text and no longer than 50 characters.
>
> **PROFILE** represents the specific type of emissions point. This field must contain the code for the emission point type. Three possibilities currently exist for this field: FLARE, STACK, and FUGITIVE. A list of the allowable profile types is provided in the extracted reference file. The EPN Profile must be text and no longer than 30 characters.
>
> **GEOGRAPHICAL COORDIANTES** represents the location of each EPN. At least one set of Geographical Coordinates (either latitude and longitude or Universal Transverse Mercator) must be submitted for each EPN listed in the delta file.
>
>> **UTM Coordinates** - If a UTM coordinate is submitted, all three of the following elements are mandatory:
>>
>> **UTM ZONE** represents the zone for the UTM Coordinate. The only values that can be used for UTM ZONE in Texas are 13, 14, and 15.
>>
>> **EAST METERS** represents the UTM Easting coordinate in meters. This field must be between 200,000 and 800,000 and may include up to three decimal places.
>>
>> **NORTH METERS** represents the UTM Northing coordinate in meters. The NORTH METERS must be between 2,800,000 and 4,200,000 and may include up to three decimal places.
>>
>> **LATITUDE** represents the Latitude of the geographical coordinate. Submitted values of Latitude should be in the form of Degree/Minute/Seconds. The LATITUDE must be a number containing between six and nine digits, including two decimal places in the format DDMMSS.SS.

LONGITUDE represents the Longitude of the geographical coordinate. Submitted values of Longitude should be in the form of Degree/Minute/Seconds. The LONGITUDE must be a number containing between seven and ten digits, including two decimal places in the format DDDMMSS.SS.

It is not necessary to submit both UTM and Latitude/Longitude coordinates. To avoid possible data errors only submit one set.

CHARACTERISTICS represent the different characteristic details for the EPN. Each EPN will have a set of CHARACTERISTICS. A list of the characteristics assigned to the different profiles is available in the appendix to this document. Each CHARACTERISTIC must be given a separate line in the delta file. Some Characteristics have specific allowed values. An example of an allowed value is the "Y" or "N" accepted for the characteristic HORDSCHG.

5. CIN (Control Identification Number)

Table Name: CIN
Business Key: CIN LABEL (10-character alphanumeric identifier)

The CIN portion of both the extracted and delta files contains information for the CINs (emission control equipment) at the site. The CIN LABEL represents the 10-character alphanumeric identifier and is the business key for the CIN portion of the extract and delta files.

All CINs sent in the extracted file must be included in the delta file. CINs with no data changes may be submitted with CRUD Type N (no change). The delta file will be compared against the extracted file to ensure that all CINs are returned in the delta file.

All information in the CIN portion of the extracted file will have a CRUD Type of E. There must be no E's in the delta file. Possible CRUD Types for CIN data are U (update), N (no change), or A (add).

All information for a particular CIN must have the same CRUD Type. For example, if the value for one attribute for a particular CINN is updated then all data submitted for that CIN will need to use CRUD Type U. If none of the data for a particular CINN needs to be updated then all data can be submitted with CRUD Type N.

The following table illustrates the possible attributes for the CIN table with example values:

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
U	CIN	FLARE1	ABATEMENT	512	

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U	CIN	FLARE1	FIN LABEL	TANK139	1
U	CIN	FLARE1	EPN LABEL	FLARE1	1
U	CIN	FLARE1	NAME	BENZENE UNIT FLARE	
U	CIN	FLARE1	VOC EFF	98.7	
U	CIN	FLARE1	NOX EFF	0.0	
U	CIN	FLARE1	CO EFF	0.0	
U	CIN	FLARE1	IOC EFF	0.0	
U	CIN	FLARE1	SO2 EFF	0.0	
U	CIN	FLARE1	C4+ EFF	0.0	
U	CIN	FLARE1	C1-C3 EFF	0.0	
U	CIN	FLARE1	NH3 EFF	86.2	
U	CIN	FLARE1	H2S EFF	0.0	
U	CIN	FLARE1	PM10 EFF	0.0	
U	CIN	FLARE1	TSP EFF	0.0	
U	CIN	FLARE1	NUMBER OF UNITS	1	
U	CIN	FLARE1	TOTAL OPERATING HOURS	7884	
U	CIN	FLARE1	PERCENT TIME OFF	10	
U	CIN	FLARE1	IM SCHEDULE	C	
U	CIN	FLARE1	FIN LABEL	TANK136	2
U	CIN	FLARE1	EPN LABEL	FLARE1	2
U	CIN	FLARE1	FIN LABEL	TANK140	3
U	CIN	FLARE1	EPN LABEL	FLARE1	3
U	CIN	FLARE1	FIN LABEL	TANK149	4
U	CIN	FLARE1	EPN LABEL	FLARE1	4

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
U|CIN|FLARE1    |ABATEMENT|512|
U|CIN|FLARE1    |FIN LABEL|TANK139|1
U|CIN|FLARE1    |EPN LABEL|FLARE1|1
U|CIN|FLARE1    |NAME|BENZENE UNIT FLARE|
U|CIN|FLARE1    |VOC EFF|98.7|
U|CIN|FLARE1    |NOX EFF|0.0|
U|CIN|FLARE1    |CO EFF|0.0|
U|CIN|FLARE1    |IOC EFF|0.0|
U|CIN|FLARE1    |SO2 EFF|0.0|
U|CIN|FLARE1    |C4+ EFF|0.0|
```

```
U|CIN|FLARE1      |C1-C3 EFF|0.0|
U|CIN|FLARE1      |NH3 EFF|86.2|
U|CIN|FLARE1      |H2S EFF|0.0|
U|CIN|FLARE1      |PM10 EFF|0.0|
U|CIN|FLARE1      |TSP EFF|0.0|
U|CIN|FLARE1      |NUMBER OF UNITS|1|
U|CIN|FLARE1      |TOTAL OPERATING HOURS|7884|
U|CIN|FLARE1      |PERCENT TIME OFF|10|
U|CIN|FLARE1      |IM SCHEDULE|C|
U|CIN|FLARE1      |FIN LABEL|TANK136|2
U|CIN|FLARE1      |EPN LABEL|FLARE1|2
U|CIN|FLARE1      |FIN LABEL|TANK140|3|
U|CIN|FLARE1      |EPN LABEL|FLARE1|3|
U|CIN|FLARE1      |FIN LABEL|TANK149|4
U|CIN|FLARE1      |EPN LABEL|FLARE1|4

U|CIN|FLARE1      |ABATEMENT|512| ■U|CIN|FLARE1      |FIN LABEL|TANK139|1
■U|CIN|FLARE1      |EPN LABEL|FLARE1|1 ■U|CIN|FLARE1      |NAME|BENZENE UNIT FLARE|
■U|CIN|FLARE1      |VOC EFF|98.7| ■U|CIN|FLARE1      |NOX EFF|0.0| ■U|CIN|FLARE1
|CO EFF|0.0| ■U|CIN|FLARE1      |IOC EFF|0.0| ■U|CIN|FLARE1      |SO2 EFF|0.0|
■U|CIN|FLARE1      |C4+ EFF|0.0| ■U|CIN|FLARE1      |C1-C3 EFF|0.0| ■U|CIN|FLARE1
|NH3 EFF|86.2| ■U|CIN|FLARE1      |H2S EFF|0.0| ■U|CIN|FLARE1      |PM10 EFF|0.0|
■U|CIN|FLARE1      |TSP EFF|0.0| ■U|CIN|FLARE1      |NUMBER OF UNITS|1| ■U|CIN|FLARE1
|TOTAL OPERATING HOURS|7884| ■U|CIN|FLARE1      |PERCENT TIME OFF|10| ■U|CIN|FLARE1
|IM SCHEDULE|C| ■U|CIN|FLARE1      |FIN LABEL|TANK136|2 ■U|CIN|FLARE1      |EPN
LABEL|FLARE1|2 ■U|CIN|FLARE1      |FIN LABEL|TANK140|3| ■U|CIN|FLARE1      |EPN
LABEL|FLARE1|3| ■U|CIN|FLARE1      |FIN LABEL|TANK149|4 ■U|CIN|FLARE1      |EPN
LABEL|FLARE1|4 ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

Business Rules for the CIN Table:

ABATEMENT - is the 3 digit code that identifies the specific type of emissions control device. Values for this code can be found in the reference tables.

FIN LABEL - is the FIN that the abatement device is linked. This field must be text and no longer 10 characters.

EPN LABEL - is the EPN that the abatement device is linked. This field must be text and no longer than 10 characters.

NAME - is the company-assigned name for the abatement device. An example of name is BENZENE UNIT FLARE. Name is a text field and may be no longer than 100 characters.

VOC EFF - is the efficiency for controlling volatile organic compounds. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

NOX EFF - is the efficiency for controlling nitrogen oxides. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

CO EFF - is the efficiency for controlling carbon monoxide. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

PM10 EFF - is the efficiency for controlling particulate mater less than or equal to 10 microns in aerodynamic diameter. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

TSP EFF - is the efficiency for controlling total solid particulate matter including both filterable and condensable portions. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

SO2 EFF - is the efficiency for controlling sulfur dioxide. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

IOC EFF - is the efficiency for controlling inorganic compounds. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

C1-C3 EFF - is the efficiency for controlling organic compounds with a range of one carbon to 3 carbons. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

C4+ EFF - is the efficiency for controlling organic compounds with a range either 4 carbons or more. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

NH3 EFF - is the efficiency for controlling ammonia. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

H2S EFF - is the efficiency for controlling hydrogen sulfide. This field must be numeric, between 1 and 100, and no longer than 5 digits including two decimal places.

While it is not required that values be supplied for all of the above listed control efficiencies, it is mandatory that at least one control efficiency be reported with a value greater than zero. Control efficiencies that are not relevant to a particular CIN may be excluded from the delta file or reported as zero. No control efficiency can be submitted in the delta file with a blank value.

IM SCHEDULE - is the inspection and maintenance schedule for the CIN.   This field must be text and no longer than 10 characters. Currently the list of valid IM SCHEDULE codes is as follows, they may also be found in the reference tables:

CODE	REPRESENTS
A	ANNUALLY
B	BI-ANNUALLY
Q	QUARTERLY
M	MONTHLY
W	WEEKLY
D	DAILY
H	HOURLY
C	CONTINUOUSLY

PERCENT TIME OFF - is the time percentage that the CIN was not operational while the FIN abated was operating. This field must be numeric and no longer than 5 digits, including two decimal places.

NUMBER OF UNITS - is the number of units comprising the CIN, For example, CINs such as flares, incinerators, etc. will have one unit. Other CINs, such as bag houses or scrubbers, may have several units. In such a case, the number of units would represent the number of bags within a bag house or the number of scrubbers if more than one is in place. This field must be numeric and no longer than two digits. Acceptable values for this field are numbers between 1 and 99.

TOTAL OPERATING HOURS - is the total hours the CIN operated during the EI reporting year. This field must be numeric and no longer than 4 digits. Values for this field must be between 1 and 8760.

PAIRING NUMBER - is the numbers within the UNIT field of the CIN portion of the extract or delta. Pairing numbers are used to determine the FIN and EPN pairing for the listed CIN. This number will key the upload program to create a control path between the FIN/EPN path and the abatement device. If the FIN/EPN path does not exist, the pairing number will also key the upload program to create this path. The PAIRING NUMBER can be used as a cross reference tool to check FIN, CIN, and EPN linkages. For the paths to which the CIN is being added in the example above, the FIN and EPN comprising the path have the same PAIRING NUMBER.

6. EMISSION

Table Name: EMISSION
Business Key: FIN LABEL, EPN LABEL, CONTAM CODE

The following table shows the fields of the EMISSION table. Every record must be submitted with a CRUD Type of A (add). Consider the following example.

FIN: TANK-1   EPN: TANK-1

The tank stores Benzene (contaminant code 52420) for half of the year and xylene (contaminant code 52510) for the remainder of the year. The tank is in a county which TCEQ requires ozone season emissions be reported. The tank experienced some emission events (1.56 TPY) and scheduled maintenance (4.0034 TPY) emissions. The following table illustrates the attributes for the EMISSION table with example values:

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
A	EMISSION	TANK-1 TANK-1 52420	ANNUAL	29.0457	
A	EMISSION	TANK-1 TANK-1 52420	DETERMINATION	A	
A	EMISSION	TANK-1 TANK-1 52420	OZONE	318.3090	
A	EMISSION	TANK-1 TANK-1 52420	MAINTENANCE	0.0000	
A	EMISSION	TANK-1 TANK-1 52420	UPSET	0.0000	
A	EMISSION	TANK-1 TANK-1 52510	ANNUAL	4.358	
A	EMISSION	TANK-1 TANK-1 52510	DETERMINATION	A	
A	EMISSION	TANK-1 TANK-1 52510	OZONE	47.7589	
A	EMISSION	TANK-1 TANK-1 52510	UPSET	1.56	
A	EMISSION	TANK-1 TANK-1 52510	MAINTENANCE	4.0034	

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
A|EMISSION|TANK-1     TANK-1     52420|ANNUAL|29.0457|
A|EMISSION|TANK-1     TANK-1     52420|DETERMINATION|A|
A|EMISSION|TANK-1     TANK-1     52420|OZONE|318.309|
A|EMISSION|TANK-1     TANK-1     52420|MAINTENANCE|0.0000|
A|EMISSION|TANK-1     TANK-1     52420|UPSET|0.0000|
A|EMISSION|TANK-1     TANK-1     52510|ANNUAL|4.358|
A|EMISSION|TANK-1     TANK-1     52510|DETERMINATION|A|
A|EMISSION|TANK-1     TANK-1     52510|OZONE|47.7589|
A|EMISSION|TANK-1     TANK-1     52510|MAINTENANCE|4.0034|
A|EMISSION|TANK-1     TANK-1     52510|UPSET|1.56|

A|EMISSION|TANK-1     TANK-1     52420|ANNUAL|29.0457| ■A|EMISSION|TANK-1     TANK-1
52420|DETERMINATION|A| ■A|EMISSION|TANK-1     TANK-1     52420|OZONE|318.309| ■
A|EMISSION|TANK-1     TANK-1     52420|MAINTENANCE|0.0000| ■A|EMISSION|TANK-1     TANK-
```

```
1     52420|UPSET|0.0000| ■ A|EMISSION|TANK-1    TANK-1    52510|ANNUAL|4.358|
■A|EMISSION|TANK-1    TANK-1    52510|DETERMINATION|A| ■A|EMISSION|TANK-1    TANK-
1    52510|OZONE|47.7589| ■ A|EMISSION|TANK-1    TANK-1
52510|MAINTENANCE|4.0034| ■A|EMISSION|TANK-1    TANK-1    52510|UPSET|1.56| ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

The Business Key for the EMISSION table is positional. The FIN and EPN LABEL portions of the key can contain up to 10 characters each, while the CONTAMCODE portion of the key is 5-characters. If either the FIN or EPN portions do not fill their allotted 10-character lengths spaces must be included to make the length of each portion 10 characters. In the example table above, there are four spaces between the last character of the TANK-1 (FIN LABEL) and the beginning of the TANK-1 (EPN LABEL), and four spaces between the last character of the TANK-1 (EPN LABEL) and the start of the contaminant code.

The CRUD Type field will contain an E for each record within the extract file. No E's may be submitted in the CRUD Type field of the delta file. The regulated entity is responsible for reviewing all records within the extract file. An E in the CRUD Type field for any record in the delta file signifies that the record was not reviewed. **Only the CRUD Type A can appear within the delta file for EMISSION records**.

Business Rules for the EMISSION Table

ANNUAL - is the total annual emission rates in tons per year. The extract file will contain all of the submitted annual emission rates from the previous submission. The emission rate quantities are to be numeric and no longer than 15 characters, including the decimal point and up to 4 decimal places. No units need be associated with this annual emission rate as TPY is understood for these emission rates.

OZONE - is the average ozone season daily emission rate in pounds per day. The extracted file will contain all of the ozone season emission rates from the previous submission. The Ozone emission rate quantities are to be numeric and no longer than 15 characters, including the decimal point and up to 4 decimal places. No units need be associated with ozone season emission rates as PPD (pounds per day) is understood for these emission rates.

UPSET - is the total annual tons of emissions at the given path associated with emission events (EE) and should include both those EE emissions reported to TCEQ Regional Offices (reportable quantities) and those that were only required to be recorded at the site (non-reportable quantities). EE emissions should be reported at the specific FIN/EPN path where the emissions were generated and released. All EE emissions within the extracted file will be 0.0. EE emission rate quantities are to be numeric and no longer than 15 characters, including the decimal point and up to 4 decimal places. No units need be associated with EE emission rates as TPY is understood for these emission rates.

MAINTENANCE - is the total annual tons of emissions at the given path associated with scheduled maintenance, startup and shutdown (SMSS) activities

and should include both those SMSS emissions reported to TCEQ Regional Offices (reportable quantities) and those that were only required to be recorded at the site (non-reportable quantities). SMSS emissions should be reported at the specific FIN/EPN path where the emissions were generated and released. All SMSS emissions within the extracted file will be 0.0. SMSS emission rate quantities are to be numeric and no longer than 15 characters, including the decimal point and up to 4 decimal places. No units need be associated with SMSS emission rates as TPY is understood for these emission rates.

DETERMINATION - is the methodology used to calculate the reported emission rate. For each submitted emission rate, a corresponding value must be submitted for DETERMINATION. The allowable values for DETERMINATION are as follows, they may also be found in the reference tables:

CODE	REPRESENTS
A	AP-42 factor or other EPA-derived factor or program such as TANKS, WATER8, etc.
B	Material Balance
D	Continuous Emissions Monitoring (CEMS)
E	Estimated
H	HRVOC Monitoring Data
M	Measured Emissions
Q	Portable Analyzer Data
V	Vendor Data
F	Predictive Emission Monitoring (PEMS)
S	Scientific Calculation based on Engineering Principles
O	Other

7. ACTIVITY

Table Name: ACTIVITY
Business Key: FIN LABEL and PROCESS CODE

Entries of ACTIVITY information are not mandatory. However, activity information is necessary to perform quality assurance on the submitted inventory and may be requested if not submitted electronically.

The ACTIVITY portion of the delta file contains two attributes, FROM DATE and TO DATE. This section contains information on the activity (process) performed by each FIN on-site. The business key for the activity portion is comprised of the FIN and the PROCESS CODE. Values for PROCESS CODE (referred to as PRC_CD) can be found in the reference tables.

Beginning with the 2009 Emissions Inventory the TCEQ requests that ACTIVITY data be submitted using only the COMBUSTN PROCESS CODE.

The following table illustrates some of the possible attributes for the ACTIVITY table with example values:

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
A	ACTIVITY	TURB-1 COMBUSTN	FROM DATE	20090101	
A	ACTIVITY	TURB-1 COMBUSTN	TO DATE	20091231	

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
A|ACTIVITY|TURB-1      COMBUSTN  |FROM DATE|20090101|
A|ACTIVITY|TURB-1      COMBUSTN  |TO DATE|20091231|

A|ACTIVITY|TURB-1      COMBUSTN  |FROM DATE|20090101| ■A|ACTIVITY|TURB-1      COMBUSTN
|TO DATE|20091231| ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

The Business Key for the ACTIVITY table is positional. The FIN LABEL portion of the key can contain up to 10 characters. The PROCESS CODE portion of the key can also contain up to 10 characters. If the FIN LABEL portion does not fill its allotted 10-character length, spaces must be included to make the length of each portion 10 characters. In the example, there are four spaces between the end of the TURB-1 and the beginning of COMBUSTN.

Business Rules for the ACTIVITY Table:

ACTIVITY data can only be submitted in the delta file using CRUD Type A. U or N can not be used in the ACTIVITY portion of the delta file.

If submission of ACTIVITY data is not necessary for your emissions inventory then no ACTIVITY records should be included in the delta file. ACTIVITY records can not be submitted with blank values.

ACTIVITY data can only be submitted for FINs with active status.

FROM DATE represents that date within the inventory year when the FIN began performing the process. This field must be a date with the format YYYYMMDD.

TO DATE represents the date within the inventory calendar year when the FIN ceased to perform the process. This field must be a date with the format YYYYMMDD.

No activity TO DATE can be earlier than the associated FROM DATE.

Since the inventory is based on a calendar year the FROM DATE can not be earlier than January 1st of that year. For example activity record submitted for the calendar year 2009 emissions inventory can not have a FROM DATE preceding 20090101.

Since the inventory is based on a calendar year the TO DATE can not be later than December 31st of that year. For example, an activity record submitted for the calendar year 2009 emissions inventory can not have a TO DATE later than 20091231.

8. MATERIAL

Table Name: MATERIAL
Business Key: FIN LABEL, PROCESS CODE, MATERIAL TYPE, FROM DATE

Entries of MATERIAL information are not mandatory. However, material information is necessary to quality assure the submitted inventory and may be requested if not submitted electronically.

The MATERIAL portion of the delta file contains two attributes: MATERIAL QUANTITY, and TO DATE. The MATERIAL table will contain information about the material used by the FIN performing the listed activities.

The business key for the MATERIAL portion of the delta file includes the FIN LABEL, PROCESS CODE (detailed previously), MATERIAL TYPE, and the FROM DATE. Values for MATERIAL TYPE (referred to as MAT_TYP) can be found in the reference tables. The FROM DATE, as stated in the ACTIVITY section above, is the date on which the FIN began processing the material. **A MATERIAL entry can only be created if there is a corresponding entry for the ACTIVITY in the ACTIVITY section of the delta file**. MATERIAL information must be submitted for the inventory year requested. Therefore, the FROM DATE can not be earlier than January 1st of the inventory year and the TO DATE can not be later than December 31st of the inventory year.

Beginning with the 2009 Emissions Inventory the TCEQ requests that MATERIAL data be submitted using the TOTALHEAT MAT_TYP. This MAT_TYP represents Total Annual Aggregate Heat Input in MMBTU.

The following table illustrates the some of the possible attributes for the MATERIAL table with example values:

CRUD TYPE	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
A	MATERIAL	TURB-1 COMBUSTN TOTALHEAT 20020101	TO DATE	20091231	MMBTU
A	MATERIAL	TURB-1 COMBUSTN TOTALHEAT 20020101	MATERIAL QUANITITY	123,456	MMBTU

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
A|MATERIAL|TURB-1    COMBUSTN  TOTALHEAT 20090101|TO DATE|20091231|
A|MATERIAL|TURB-1    COMBUSTN  TOTALHEAT 20090101|MATERIAL QUANTITY|123456|MMBTU

A|MATERIAL|TURB-1    COMBUSTN  TOTALHEAT 20090101|TO DATE|20091231|
■A|MATERIAL|TURB-1    COMBUSTN  TOTALHEAT 20090101|MATERIAL QUANTITY|123456|MMBTU ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

The Business Key for the MATERIAL table is positional. The FIN LABEL, PROCESS CODE, or MATERIAL TYPE may each contain up to 10 characters, while the FROM DATE must contain 8 characters. If the FIN LABEL, PROCESS CODE, or MATERIAL TYPE portions do not completely fill their allotted character lengths, spaces must be included to make the length of each portion 10 characters.

Business Rules for the MATERIAL Table

MATERIAL data can only be submitted in the delta file using CRUD Type A. U or N can not be used in the MATERIAL portion of the delta file.

If submission of MATERIAL data is not necessary for your emissions inventory then no MATERIAL records should be included in the delta file. MATERIAL records can not be submitted with blank values.

MATERIAL data can only be submitted for FINs with active status.

FROM DATE - is that date the FIN began processing the material. This field must be a date with the format YYYYMMDD using no punctuation marks.

TO DATE represents the date the FIN ceased processing the material. This field must be a date with the format YYYYMMDD using no punctuation marks.

The FROM DATE can not be earlier than January 1st of the year the inventory is being submitted for. For example, an inventory submitted in for calendar year 2009 can not have a FROM DATE earlier than 20090101.

The TO DATE can not be later than December 31st of the year the inventory is being submitted for. For example, an inventory submitted in for calendar year 2009 can not have a TO DATE later than 20091231.

MATERIAL QUANTITY - is the specific amount of material the FIN processed. This field must be numeric and no longer than 12 digits including 4 decimal places. This material quantity must also have a valid unit of measurement in the unit field. The TCEQ requests that the TOTALHEAT MATERIAL TYPE be used the valid units to use for MATERIAL QUANTITY are MMBTU.

9. FACTOR

Table Name: FACTOR
Business Key: FIN LABEL, PROCESS CODE, MATERIAL TYPE, FROM DATE, POLU CLASS

Entries of FACTOR information are not mandatory for uploading. However, emission factor information is necessary to assist the quality assurance of the submitted inventory and may be requested if not submitted electronically. Information within the

FACTOR portion of the delta file will consist of emission factor data used to determine actual emission rates.

The FACTOR portion of the delta file contains four attributes: FACTOR QUANTITY, NUMERATOR UNIT, and DENOMINATOR UNIT. The FACTOR table will contain information about the emission factors used to calculate the submitted emissions for the FINs performing the listed activities on the materials.

The business key for the FACTOR portion of the delta file includes the FIN LABEL, PROCESS CODE (detailed previously), FROM DATE, MATERIAL TYPE, and the POLU CLASS. The FROM DATE, as stated in the ACTIVITY and MATERIAL sections above, is the date that the FIN began processing the material and for which the emission factor is valid. **A FACTOR entry can only be created if there is corresponding entries in the ACTIVITY and MATERIAL sections of the delta file**. FACTOR information must be submitted for the inventory year requested. Therefore, the FROM DATE can not be earlier than January 1st of the inventory year.

The following table illustrates the some of the possible attributes for the FACTOR table with example values:

CRUD TYPE	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
A	FACTOR	BOILER1 COMBUSTN TOTALHEAT 20010101NOX	FACTOR QUANTITY	5.3	
A	FACTOR	BOILER1 COMBUSTN TOTALHEAT 20010101NOX	NUMERATOR UNIT	POUNDS	
A	FACTOR	BOILER1 COMBUSTN TOTALHEAT 20010101NOX	DENOMINATOR UNIT	MMBTU	

Below is an example of how the data should appear in a delta file, as single line or wrapped text:

```
A|FACTOR|BOILER1    COMBUSTN   TOTALHEAT 20080101NOX|FACTOR QUANTITY|5.3|
A|FACTOR|BOILER1    COMBUSTN   TOTALHEAT 20080101NOX|NUMERATOR UNIT|POUNDS|
A|FACTOR|BOILER1    COMBUSTN   TOTALHEAT 20080101NOX|DENOMINATOR UNIT|MMBTU|

A|FACTOR|BOILER1    COMBUSTN   TOTALHEAT 20080101NOX|FACTOR QUANTITY|5.3|
■A|FACTOR|BOILER1    COMBUSTN   TOTALHEAT 20080101NOX|NUMERATOR UNIT|POUNDS|
■A|FACTOR|BOILER1    COMBUSTN   TOTALHEAT 20080101NOX|DENOMINATOR UNIT|MMBTU| ■
```

(■ represents the ASCII line feed that must be present in the delta file.)

The Business Key for the FACTOR table is positional. The FIN LABEL, PROCESS CODE, MATERIAL TYPE and POLU CLASS may each contain up to 10 characters, while the FROM DATE must contain eight characters. If the FIN LABEL, PROCESS CODE, or MATERIAL TYPE portions do not completely fill their allotted 10-character lengths, spaces must be included to occupy the blank spaces.

Business Rules for the FACTOR Table:

FACTOR data can only be submitted in the delta file using CRUD Type A. U or N can not be used in the FACTOR portion of the delta file.

If submission of FACOTR data is not necessary for your emissions inventory then no FACTOR records should be included in the delta file. FACTOR records can not be submitted with blank values.

FACTOR data can only be submitted for FINs with active status.

FACTOR QUANTITY - is the numeric value for the emission factor. This field must be numeric and no longer than 15 digits including 4 decimal places

NUMERATOR UNIT - is the numerator unit listed for the emission factor. This field must be text and is mandatory only for material records that a FACTOR QUANTITY is submitted.

DENOMINATOR UNIT - is the denominator unit listed for the emission factor. This field must be text and is mandatory only for material records that a FACTOR QUANTITY is submitted.

10. SPECIAL EMISSION

Table Name: SPECIAL EMISSION
Business Key: FIN LABEL, EPN LABEL, CONTAMINANT CODE, TEST DATE, START HOUR

The SPECIAL EMISSION section is not the appropriate place to report any emissions data associated with emission events or scheduled maintenance start-up or shutdown operations. The Special Emissions portion of the delta file will be used for reporting special hourly inventory data to the TCEQ. The SPECIAL EMISSION table and all of its attributes have active indicator "U". TCEQ will not extract and reflect to industry any Special Emission data. Industry will be responsible for creating the SPECIAL EMISSION portion of the delta file. All entries in the SPECIAL EMISSION portion of the delta file must have CRUD Type "A"(add).

The business key for Special Emission records must include the FIN LABEL, EPN LABEL, CONTAMINANT CODE, TEST DATE and START HOUR. The START HOUR portion will be a one- or two- digit number between 1 and 24, inclusive, with 1 representing the hour from midnight until 1 AM and 24 representing the hour from 11 PM until midnight on the specified test date.

Hourly inventory requests are for specific days during a year. This is why TEST DATE is part of the business key. The TEST DATE represents the specific date that the special emissions are being submitted. The format for TEST DATE is YYYYMMDD.

The following table illustrates the some of the possible attributes for the SPECIAL EMISSION table with example values. For the path FIN: TANK-1, EPN: TANK-1 hourly emissions are requested for August 15, 2001 (20010815). The tank stores Benzene (52420). The following special emission rates represent emissions from batch loading (B) between the hours of 8 AM (hour 09) and Noon (hours 09, 10, 11, and 12).

CRUD Type	TABLE NAME	BUSINESS KEY	ATTRIBUTE	VALUE	UNIT
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081509	QUANTITY	1.589	TONS
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081509	REASON CODE	B	
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081510	QUANTITY	4.7765	TONS
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081510	REASON CODE	B	
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081511	QUANTITY	10.2018	TONS
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081511	REASON CODE	B	
A	SPECIAL EMISSION	TANK-1 TANK-1 524202008081512	QUANTITY	14.1	TONS
A	SPECIAL EMISSION	TANK-1 TANK-1 525102008081512	REASON CODE	B	

Below is an example of how the data should appear in a delta file, as single line or wrapped text, is as follows:

```
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081509|QUANTITY|1.589|TONS
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081509|REASON CODE|B|
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081510|QUANTITY|4.7765|TONS
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081510|REASON CODE|B|
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081511|QUANTITY|10.2018|TONS
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081511|REASON CODE|B|
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081512|QUANTITY|14.1|TONS
A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081512|REASON CODE|B|


A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081509|QUANTITY|1.589|TONS
■A|SPECIAL EMISSION|TANK-1     TANK-1     524202008081509|REASON CODE|B| ■A|SPECIAL
EMISSION|TANK-1     TANK-1     524202008081510|QUANTITY|4.7765|TONS ■A|SPECIAL
EMISSION|TANK-1     TANK-1     524202008081510|REASON CODE|B| ■A|SPECIAL
EMISSION|TANK-1     TANK-1     524202008081511|QUANTITY|10.2018|TONS ■A|SPECIAL
EMISSION|TANK-1     TANK-1     524202008081511|REASON CODE|B| ■A|SPECIAL
EMISSION|TANK-1     TANK-1     524202008081512|QUANTITY|14.1|TONS ■A|SPECIAL
EMISSION|TANK-1     TANK-1     524202008081512|REASON CODE|B| ■
```

(■ Represents the ASCII line feed character that must be present in the delta file.)

The Business Key for the SPECIAL EMISSION table is positional. The FIN and EPN LABEL portions may contain up to 10 characters, the CONTAMINANT CODE must contain five, the TEST DATE must contain eight characters, and the START HOUR must contain two characters. If either the FIN or EPN LABEL portions do not completely fill their allotted 10-character length, spaces must be included to make the length of each portion 10 characters. In the example, there are four spaces between the last character of the TANK-1 (FIN LABEL) and the beginning of TANK-1 (EPN LABEL); four spaces between the last character of the EPN LABEL and the start of the CONTAMINANT CODE; no spaces between the CONTAMINANT CODE and the TEST DATE; and no spaces between the TEST DATE and the START HOUR.

Business Rules for the SPECIAL EMISSION Table

Only CRUD Type **A** (add) may appear in the SPECIAL EMISSION table.

QUANTITY represents the actual emission quantity released to the atmosphere for the given contaminant at the specific FIN and EPN during the specified hour on that test date. This field must be numeric and no longer than 15 digits including 4 decimal places. A special emissions QUANTITY must be accompanied by a UNIT of measure, the unit of measure for the Special Emission quantity must be POUNDS.

REASON CODE represents the reason the special emission quantity was released. This field must be text and no longer than 10 characters. The list of the valid reason codes are as follows, they may also be found in the reference tables:

CODE	REPRESENTS
BL	Batch Loading
L	Leaks
M	Maintenance (Non Start-up or Shutdown)
MS	Maintenance Plus Start-up or Shutdown
N	Normal
O	Other
RM	Routine and Maintenance Operations
RU	Routine and Upset Operations
RH	Routine, but higher than normal
RL	Routine, but lower than normal
RS	Routine plus Start-Up or Shutdown
SD	Emissions during Shutdown
SU	Emissions during Start-up
SP	Spill
UI	Unit Idle
US	Unit Shutdown
UP	Upset
UT	Upset and Start-up or Shutdown
UM	Upset plus Maintenance Emissions