**AFS (AIRS Facility Subsystem) data file format**

As modified by Environ and TCEQ for EPS3/NEI/TCEQ needs, containing extra informational data fields for point sources from a typical TCEQ STARS Photochemical Modeling Extract.

This format is a flat file format, containing one record for each pollutant for each emission point.

|  |  |  |  |
| --- | --- | --- | --- |
| **VARIABLE** | **COLUMNS** | **TYPE** | **DESCRIPTION** |
| ITYPE | 1 | A | Inventory type (optional) 1 |
| IREFYR | 3-4 | I | Projection year (optional) |
| IBASYR | 6-7 | I | Base Inventory year (optional) |
| INETYPE | 9-10 | A | Emissions type 2 |
| INFIPS | 12-16 | A | FIPS state&county code |
| INSBRG | 18-22 | A | Subregion code (city FIPS) (optional), but TCEQ defines as Area of State 3 |
| INSIC | 24-27 | A | Standard Industrial Classification code (describes the type of industry) |
| INSCC | 29-38 | A | Source Classification Code (describes the equipment producing the emissions) |
| INPLNT | 40-49 | A | Plant identification number (as reported to NEI) 4 |
| INSTCK | 51-60 | A | Stack number (as reported to NEI) 5 |
| INPNT | 62-71 | A | Emission Point identifier (as reported to NEI) (optional) 6 |
| INSEG | 73-75 | I | Segment number (optional) |
| IPEROD | 77-78 | A | Period of Emission 7 |
| IBEGDT | 80-87 | I | Beginning time (YYMMDDHH) |
| IENDDT | 89-96 | I | End time (YYMMDDHH) 8 |
| XLOC | 98-107 | R | Latitude (decimal degrees) or UTM Easting |
| YLOC | 109-118 | R | Longitude (decimal degrees) or UTM Northing |
| IZONE | 120-121 | I | UTM zone (blank if not UTM coordinates) |
| STKHT | 123-127 | R | Stack Height (m) |
| STDIAM | 129-133 | R | Stack Exit Diameter (m) |
| STEXTP | 135-139 | R | Stack gas Exit Temperature (deg. K) |
| STEXVL | 141-145 | R | Stack gas Exit Velocity (m/s) |
| INTHRU(4) | 147-149  151-153  155-157  159-161 | I | Seasonal operating schedule (%) (optional)  Dec-Feb (winter)  March-May (spring)  June-Aug (summer)  Sept-Nov (fall) |
| IHRPDY | 163-164 | I | Operational Hours per day (optional) |
| IBEGHR | 166-167 | I | Starting hour (optional) |
| IDYPWK | 169 | I | Days per week (optional) |
| IHRPYR | 171-174 | I | Hours per year (optional) |
| INPOL | 176-180 | I | Pollutant code (SAROAD) 9 |
| CRTPOL | 182-191 | R | Emission of specified Pollutant (tons) |
| ICEQCD | 193-195 | I | Primary control equipment code (optional) |
| CEQEFF | 197-202 | R | Control Effectiveness (percent) (optional) |
| RULEFF | 204-209 | R | Rule Effectiveness (percent) (optional) |
| RULPEN | 211-216 | R | Rule Penetration (percent) (100% for point sources) (optional) |
| RN | 220-230 | A | TCEQ Regulated Entity Reference Number (optional) |
| ACCOUNT | 232-238 | A | TCEQ Air account identifier (optional) |
| FIN | 240-249 | A | FIN (optional) |
| EPN | 251-260 | A | EPN (optional) |
| HORIZ | 262 | A | Horizontal discharge? (optional) 10 |
| PT\_TYPE | 264-265 | A | Emission point type (optional) 11 |
| GROUP\_TYPE | 267-276 | A | STARS FIN Group Type (major activity)  (optional) 12 |
| FIN\_PROF | 278-292 | A | STARS FIN Profile (subgroup activity)  (optional) 13 |
| ORIS | 294-299 | A | EIA (Energy Information Administration) number for electrical generators (optional) |
| UNIT\_ID | 301-306 | A | Generator ID for the ORIS (optional) |
| OWNER | 308-332 | A | Owner of site (optional) |
| SITE\_NAME | 334-358 | A | Name of site (optional) |
| COUNTY | 360-369 | A | County of site location (optional) |
| CITY | 371-385 | A | City or nearest city (optional) |
| POLLUTANT | 387-390 | A | Criteria pollutant name (optional) |
| CONTAM | 392-396 | A | TCEQ contaminant code (optional) |
| SPECIES | 398-417 | A | Pollutant species name (optional) |
| EI\_METHOD | 419 | A | Method of emission rate estimate (optional) 14 |
| PROF\_TYPE | 421-423 | A | VOC speciation profile type (optional) 15 |
| EVENT\_TYPE | 425-426 | A | Special event code (optional) 16 |
| SOURCE | 428-432 | A | Origin of emissions data (optional) 17 |
| UPDATE | 434-438 | A | Extract version (optional) 18 |

**Note:**

data type

A=character/alpha field

I=integer field

R=real number field

“(optional)” denotes that field may be left blank, because it is not required by EPS3

**Footnotes**

1. Inventory Types include:

A = Adjusted (typically indicates a Projected record)

B = Base (default from STARS)

R = RFP

M = Modeling (emissions updated by Modeling staff, other than “A”)

2. EPS3 Emissions Types include:

AC = Actual (default for extracting data from STARS)

The following are not available from STARS:

AA= Allowable based on activity level limit

AB = Allowable based on activity level an emission factor limits

AE = Allowable based on emissions total

AF = Allowable based on emission factor limit

GB = Growth and Base controls

GN = Growth and New controls

LB = Limit and Base Controls

LN = Limit and New Controls

3. Areas of State include:

HGB = within the Houston/Galveston/Brazoria NAA counties

BPA = within the Beaumont/Port Arthur NAA counties

DFW = within the Dallas/Fort Worth 8-hr O3 NAA counties

ELP = within the El Paso NAA county

AUS = within the Austin MSA

SAN = within the San Antonio MSA

CC = within the Corpus Christi MSA

VIC = within the Victoria MSA

TLM= within the Tyler/Longview/Marshall MSA

ETX = within the “East Texas” attainment 90 counties

WTX = within the “West Texas” attainment counties

4. Plant identifier:

is synonymous with “site” or EPA “facility”.

NEI uses “state facility id”.

STARS uses “epa account number”.

1. Stack identifier:

Is the pollutant release point into the atmosphere.

NEI uses “emission release point id”.

STARS uses “epa epn id”

1. Point identifier:

Is the identifier of the piece of equipment that generates the emissions.

NEI uses “emission unit id”.

STARS uses “epa fin id”

7. Period of emissions include:

blank = annual

AD = Average O3-season Day (typical from STARS, June 1 – August 31)

PO = Peak O3-season day

PC = Peak CO day

S = Specified interval (special inventory, hourly data)

8. The time interval stops at the start of the specified end hour.

9. SAROAD/AIRS Pollutant codes include:

42101 = CO

42603 = NOx

43104 = VOC

10. Y = Horizontal Discharge (non-vertical discharge or obstructed vertical discharge)

N = unobstructed vertical discharge

blank = unknown or unreported

11. Emission Point types include:

ST = Stack

FL = Flare

FU = Fugitive

TK = Tank (coming soon, perhaps)

WW = WasteWater treatment (coming soon, perhaps)

CT = Cooling Tower (coming soon, perhaps)

12. STARS FIN Group Types include:

Cleaning, Combustion, Coating or Printing, Cooling Towers, Equipment Leak Fugitives, Loading, Other, Tanks, VOC Process, and Wastewater

13. STARS FIN Profiles are a subcategory of activities for the FIN Group Type,

e.g., Combustion Group has several Profiles, two of which are I.C. Engine and Flare.

14. EI Methods include:

A = AP-42

B = mass Balance

C = Calculated

D = continuous monitor (CEM)

E = production Estimate

F = predictive monitor (PEM)

M = stack Measurement (stack sample)

S = Scientific calculation

V = Vendor-supplied factor

O = Other

15. VOC speciation profile types include:

Pt = Point Specific

HGB = HGB 8-co. SCC average

BPA = BPA 3-co. SCC average

DFW = DFW 9-co. SCC average

ELP = El Paso co. SCC average

ETX = East Texas 90-co. SCC average

WTX = West Texas SCC average

TX = all of Texas SCC average

A = Austin area SCC average

SA = San Antonio area SCC average

CC = Corpus Christi SCC average

V = Victoria area SCC average

TLM = Tyler-Longview-Marshall area SCC average

EPA = EPA default (nat’l average)

U = Unknown

16. Special Event codes include:

BL = Batch Loading

L = Leaks

M = Maintenance (excluding SU and SD)

MS = Maintenance plus SU or SD

N = Normal

O = Other

RH = Routine, but Higher than normal

RL = Routine, but Lower than normal

RM = Routine plus Maintenance operations

RS = Routine plus SU or SD

RU = Routine plus Upset emissions

SU = Start-Up emissions

SD = ShutDown emissions

SP = Spill

UI = Unit Idle

US = Unit permanently Shutdown

UP = Upset

UT = Upset plus SU or SD

UM = Upset plus Maintenance

17. Source/origin of Emissions data includes:

STAR = State of Texas Air Reporting system (STARS is replacement for PSDB)

ARP = Acid Rain Program

SIxx = Special Inventory for year xx

EE = Emission Event above RQ from CCEDS/STEERS

EMRS = Emission Event from EMRS

CORR = Corrected by Modeler/EI staff after extract

ADD = manually Added (not in PSDB/STARS)

PSDB = Point Source DataBase

18. STARS Modeling Extract Version

e.g., v3b = the third full extract of STARS emissions for that year and the second SAS creation of the AFS file with that extract.