

## Abbreviations

AEIR	annual emissions inventory report
AEIU	annual emissions inventory update
AMS	area and mobile source
API	American Petroleum Institute
AVO	audio/visual/olfactory
BTEX	benzene, toluene, ethylbenzene, and xylenes
Btu	British thermal unit(s)
CAS	Chemical Abstracts Service
CEMS	continuous emissions monitoring system(s)
CFR	Code of Federal Regulations (40 CFR xx = Title 40, Code of Federal Regulations, section xx)
CIN	control identification number
Cl <sub>2</sub>	chlorine
CHP	combined heat and power
CO	carbon monoxide
COI	compound(s) of interest
CFR	Code of Federal Regulations
DRE	destruction and removal efficiency
EAS	Emissions Assessment Section
EE	emissions events
EGU	electric generation unit
EI	emissions inventory
EIQ	emissions inventory questionnaire
EPA	United States Environmental Protection Agency
EPN	emission point number
FCAA	federal Clean Air Act
FCCU	fluid catalytic cracking unit
GHG	greenhouse gas

GOR	gas/oil ratio
H <sub>2</sub> S	hydrogen sulfide
HAP	hazardous air pollutant
HCN	hydrogen cyanide
HF	hydrogen fluoride
HRSG	heat recovery steam generator
HRVOC	highly reactive volatile organic compound
HVAC	heating, ventilation, and air conditioning
IEI	initial emissions inventory
lb	pound(s)
LDAR	leak detection and repair
MAERT	Maximum Allowable Emissions Rate Table
MEROX	mercaptan oxidation
MM	million
MSS	maintenance, startup, and shutdown
NAAQS	national ambient air quality standards
NAD83	North American Datum of 1983
NH <sub>3</sub>	ammonia
NSCR	nonselective catalytic reduction
NO <sub>x</sub>	oxides of nitrogen
OA	Office of Air
Pb	Lead
PBR	permit by rule
PEMS	predictive emissions monitoring system(s)
PM	particulate matter
PM <sub>2.5</sub>	particulate matter no larger than 2.5 micrometers in diameter
PM <sub>10</sub>	particulate matter no larger than 10 micrometers in diameter
ppd	pounds per day
ppm	parts per million
psi	pounds per square inch

psia	pounds per square inch, absolute
psig	pounds per square inch, gauge
RATA	relative accuracy test audit
RN	regulated entity reference number
RVP	Reid Vapor Pressure
SIC	Standard Industrial Classification
SCC	source classification code
SO <sub>2</sub>	sulfur dioxide
SOCMI	synthetic organic chemical manufacturing industry
SMSS	scheduled maintenance, startup, and shutdown
SRU	sulfur recovery unit
STARS	State of Texas Air Reporting System
STEERS	State of Texas Environmental Electronic Reporting System
TAC	Texas Administrative Code
TCAA	Texas Clean Air Act
TCEQ	Texas Commission on Environmental Quality
THSC	Texas Health and Safety Code
TOC	total organic carbon
TRI	Toxics Release Inventory
tpy	tons per year
—u	unclassified
UTM	Universal Transverse Mercator
VOC	volatile organic compound
VRU	vapor recovery unit

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## Glossary

The definitions in this glossary are intended to assist you in understanding matters related to the annual EI. **Nothing in this glossary supersedes any information in any state or federal law, rule, or regulation. In the case of any discrepancy between information herein and information in a state or federal law, rule, or regulation, the law, rule, or regulation takes precedence.**

**abatement code**—A numeric code that identifies an abatement device. A list of abatement codes is available at the EAS webpage: <[www.tceq.texas.gov/goto/ieas](http://www.tceq.texas.gov/goto/ieas)>. Refer to the Electronic Emissions Inventory File Specifications Reference Tables.

**abatement device**—A piece of equipment or recognized operation that limits, controls, or abates emissions of certain contaminants associated with certain processes. Examples include baghouses, flares, scrubbers, condensers, vapor recovery units, and component fugitive Inspection and Maintenance programs. Synonymous with control device.

**account**—See Title 30, Texas Administrative Code (TAC), Section 101.1. For sources *where a permit is required under 30 TAC Chapter 122 (Federal Operating Permits)*, all sources aggregated as a site. For all other sources, any combination of sources under common ownership or control and located on one or more properties that are contiguous, or contiguous except for intervening roads, railroads, rights-of-way, waterways, or similar divisions.

**Annual emissions**—include all of a site’s actual emissions associated with authorized (routine) operations and authorized maintenance, startup, and shutdown activities.

**API gravity**—The weight per unit volume of hydrocarbon liquids as measured by a system recommended by the American Petroleum Institute:

$$API\ gravity = \frac{141.5}{Specific\ gravity} \times 131.5$$

**attainment county**—A county where levels of criteria air pollutants meet the national ambient air quality standards for the pollutants. Attainment areas are defined using federal pollutant limits set by the EPA. Refer to FCAA 107(d) for further explanations of “nonattainment” and “attainment” designations. Compare *nonattainment county*.

**average flow to flare (flared gas flow rate)**—The average volumetric flow rate of flared gas, in thousand standard cubic feet per minute, while routine process flow is sent to the flare. It does not include upset or emergency flow to the flare.

**Chemical Abstracts Service number**—A unique number assigned to a substance. Although the EAS identifies each substance with a *contaminant code* rather than with its CAS number, you should include the CAS number when adding a new contaminant to your EI. This additional information will be used for quality assurance.

**component**—A piece of equipment, including pumps, valves, compressors, connectors, and pressure relief valves, which has the potential to leak volatile organic compounds. Components are not considered individual facilities and must be

grouped and represented as collective sources in the EI according to the guidance in Chapter 3 and Technical Supplement 3.

**condensate**—A liquid hydrocarbon with an API gravity greater than 40° API at 60° F (and a specific gravity less than 0.8251).

**contaminant**—A substance emitted into the air.

**contaminant code**—A contaminant's five-digit identifying code. A list is available at the EAS webpage: <[www.tceq.texas.gov/goto/ieas](http://www.tceq.texas.gov/goto/ieas)>.

**control device**—See *abatement device*.

**control identification number (CIN)**—A label that uniquely identifies an abatement device; limited to 10 alphanumeric characters. Please note that no two separate abatement devices within an EI may share the same CIN.

**design capacity**—A combustion unit's maximum heat input rating, in million Btu per hour.

**design flow rate**—The maximum flow rate that a cooling tower is designed to accommodate, in million gallons per day.

**destruction and removal efficiency (DRE)**—A percentage that represents the number of molecules of a compound removed or destroyed relative to the number of molecules entering the system.

**electric generation unit (EGU)**—For the EI, a boiler (including an auxiliary steam boiler), internal combustion engine, or stationary gas turbine (including a duct burner used in a turbine exhaust duct) that generates electric energy for compensation and is owned or operated by a person doing business in Texas, including a municipal corporation, an electric cooperative, or a river authority.

**emissions**—Air contaminants generated by a facility. See also *contaminant*.

**Emissions Assessment Section (EAS)**—The section of the TCEQ's Office of Air responsible for the EI process.

**emissions event**—Any upset event or unscheduled maintenance, startup, or shutdown activity from a common cause that results in unauthorized emissions of air contaminants from one or more points at a regulated entity.

**emissions inventory forms**—The forms used to add new structural information to an EI or to supply material usage data. Blank forms, sample forms, and instructions are available at the EAS webpage: <[www.tceq.texas.gov/goto/ieas](http://www.tceq.texas.gov/goto/ieas)>.

**emissions inventory questionnaire (EIQ)** —A computer printout, historically a paper report, that shows a site's self-reported data, including, but not limited to, account information, contact information, process structural data, facility identification data, control device data, emission point data, and path emissions for a given calendar year.

**emissions inventory structure**—The way that a site's facilities, abatement devices, and emission points are represented in the EI. Formerly *account structure*.

**emission point**—The geographical location (point) where emissions enter the air. An emission point is described by its group, profile and characteristics. Each emission point in the EI is uniquely identified by an *emission point number*.

**emission point number (EPN)**—A label that uniquely identifies a given emission point; limited to 10 characters. Please note that no two distinct emission points in an EI may share the same EPN. The EPNs on your EIQ must match those on your permit.

**excess opacity event**—When an opacity reading is equal to or exceeds 15 additional percentage points above an applicable opacity limit, averaged over 6 minutes as defined in 30 TAC Section 101.1.

**expected maximum capacity**—The projected greatest capacity of a facility based on its physical and operational design or configuration and planned operation.

**facility**—A discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source, including appurtenances other than emission-control equipment. A mine, quarry, well test, or road is not a facility. An individual fugitive component is not a facility.

**facility identification number (FIN)**—A label that uniquely identifies a given facility; limited to 10 alphanumeric characters. Please note that no two distinct facilities may share the same FIN. The FINs on your EIQ must match those on your permit.

**flare temperature**—The temperature of the flame tip of a flare in degrees Fahrenheit.

**generation capacity**—The maximum electrical generating output in megawatts for electric generation units. The capacity is based on a continuous steady-state operation.

**greenhouse gases (GHGs)**—Carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF<sub>6</sub>).

**gas/oil ratio (GOR)**—The relation of gas in cubic feet to the production of oil in barrels.

**hazardous air pollutant (HAP)**—An air pollutant designated as hazardous by the EPA. HAPs are identified in federal Clean Air Act 112(b); the 1990 Act allows the EPA to modify the list as necessary. A current list can be found on the EPA's website. All HAPs that meet the reporting requirements must be listed individually (speciated) in your EI.

**highly reactive volatile organic compounds (HRVOCs)**—For EI purposes, the compounds ethylene, propylene, all isomers of butene, and 1,3-butadiene. This definition applies to all areas of the state, not just those counties subject to the HRVOC rules found in 30 TAC Section 115.

**Maximum Allowable Emissions Rate Table (MAERT)**—As defined in 30 TAC Section 116.10, a table included with a preconstruction permit issued under Chapter 116 that contains the allowable emission rates established by the permit for a facility.

**micrometer**—One-millionth of a meter.

**nonattainment county**—A defined region within the state designated by the EPA as failing to meet the national ambient air quality standard for a pollutant for which a standard exists. The EPA will designate the area as nonattainment under the provisions of FCAA 107(d). For the official list and boundaries of nonattainment areas, see 40 CFR Part 81 and pertinent *Federal Register* notices.

**nonreactive organic compounds**—A group of organic compounds that do not significantly contribute to ozone formation.

**non-reportable emissions event**—Any emissions event that in any 24-hour period does not result in an unauthorized emission from any emissions point equal to or more than the reportable quantity as defined in 30 TAC Section 101.1.

**non-reportable scheduled maintenance, startup, shutdown activity**—An SMSS activity that is recorded as required by 30 TAC Section 101.211.

**ozone season**—The period from May 1 through September 30 of a year as defined in Title 40, Code of Federal Regulations (40 CFR), Part 51.

**path**—A path consists of a facility (tracked by its FIN) that generates emissions; an associated emission point (tracked by its EPN) where emissions enter the atmosphere; and any abatement devices (tracked by CINs) that control emissions. All paths must consist of at least a FIN and an EPN. If emissions produced at a FIN are not abated before entering the atmosphere at the associated EPN, then the path consists only of a FIN and an EPN. If, however, an abatement device controls emissions between the FIN and the EPN, then the associated path consists of a FIN, a CIN, and an EPN.

**percent max capacity**—The ratio of a facility’s annual operating capacity to the facility’s maximum capacity:

$$\text{Percent Max Capacity} = \frac{\text{Capacity}_{\text{actual}}}{\text{Capacity}_{\text{maximum}}} \times 100$$

For a definition of *Capacity* maximum, see expected maximum capacity.

**percent time offline (PTO)**—The ratio of the device’s downtime to the annual operating time. If a control device requires a minimum temperature to be fully functional, it is considered offline for the time period(s) when the minimum temperature is not met.

$$\text{PTO} = \frac{\text{Hours Offline}}{\text{Annual Operating Hours}} \times 100$$

*Example:* FLARE1 operated on an emergency basis for a total of 1200 hours during the year. The flare was offline for 288 hours and malfunctioned for an additional 83 hours. The PTO for FLARE1 is:

$$\text{PTO} = \left( \frac{288 + 83}{1200} \right) \times 100 = 30.92$$

**permit by rule**—State air authorization for activities that produce more than a *de minimis* level of emissions but less than other New Source Review permitting options.

**particulate matter**— Any material, except uncombined water, that exists as a solid or liquid in the atmosphere or in a gas stream at standard conditions.

**PM<sub>2.5</sub>**—Portion of particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers. PM<sub>2.5</sub> is a subset of PM and PM<sub>10</sub>.

**PM<sub>10</sub>**—Portion of particulate matter with an aerodynamic diameter less than or equal to 10 micrometers. PM<sub>10</sub> is a subset of PM.

**potential to emit (PTE)**—The maximum capacity of a facility or stationary source to emit a pollutant under its physical and operational design. Any physical or enforceable operational limitation on the capacity of the facility or stationary source to emit a pollutant, including the use of air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, should be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions, as defined in 40 CFR 51.165(a)(1)(viii), do not count in determining a stationary source's potential to emit.

**regulated entity**—As defined at 30 TAC Section 101.1, all regulated units, facilities, equipment, structures, or sources at one street address or location that are owned or operated by the same person. The term includes any property under common ownership or control identified in a permit or used in conjunction with the regulated activity at the same street address or location. Owners or operators of pipelines, gathering lines, and flowlines under common ownership or control in a particular county may be treated as a single regulated entity for purposes of assessment and regulation of emissions events.

**regulated entity reference number**—A number that the Central Registry assigns to a location where a TCEQ-regulated activity occurs.

**regulated pollutant**—Includes any VOC; any pollutant subject to the federal Clean Air Act, Section 111; any pollutant listed as a hazardous air pollutant under FCAA Section 112; each pollutant for which a national primary ambient air quality standard has been promulgated (including carbon monoxide); and any other air pollutant subject to requirements under TCEQ rules, regulations, permits, orders of the Commission, or court orders.

**reportable emissions event**—Any emissions event that, in any 24-hour period, results in an unauthorized emission from any emissions point equal to or in excess of the reportable quantity as defined in 30 TAC Section 101.1.

**reportable scheduled maintenance, startup, shutdown activity**—An SMSS activity as defined in 30 TAC Section 101.1, where prior notice and a final report is submitted as required by Section 101.211.

**scheduled maintenance, startup, shutdown (SMSS) activity**—An activity as defined in 30 TAC Section 101.1 that is used in reporting required by Section 101.211.

**site**—As defined in 30 TAC Section 122.10, the total of all stationary sources located on one or more contiguous or adjacent properties, which are under common control of the same person (or persons under common control). A research-and-development operation and a collocated manufacturing facility are considered a single site if they each have the same two-digit Major Group Standard Industrial Classification (SIC) code (as described in the Standard Industrial Classification Manual, 1987) or if the research-and-development operation is a support facility for the manufacturing facility.

**site centroid**—The physical center of a site, represented in coordinate form (latitude and longitude or UTM). Formerly *account centroid*.

**source**—A point of origin of air contaminants, whether privately or publicly owned or operated.

**source classification code**—An eight-digit EPA-developed code that identifies a specific industrial process.

**special inventory county**—A county under special provisions related to emissions reporting. A list of these counties can be found in Chapter 1 in the Special Inventory Request section.

**speciation**—Categorization of the individual chemical substances, or species, within an emission.

**State of Texas Air Reporting System (STARS)**—The database where EI data are stored.

**structure**—The representation, in the TCEQ database, of the paths (formerly “links”) in an EI. EI structure must reflect the processes as shown on the site’s process flow diagram. For more information on proper EI structure, consult the appropriate sections of this document.

**Title V permit**—An operating permit required by Title V of the federal Clean Air Act as amended in 1990.

**toxic**—A chemical so designated by the EPA. Toxic chemicals are identified in 40 CFR 372.65.

**volatile organic compounds (VOCs)**—A group of compounds that photochemically react in the atmosphere to form ozone. The official definition is found in 40 CFR 51.100(s), except 51.100(s)(2-4), as amended on Aug. 1, 2016 (81 *Federal Register* 50330).

