

APPENDIX A

Acronyms & Definitions



APPENDIX A: ACRONYMS & DEFINITIONS

ACRONYMS

| | | |
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| AQD | | Air Quality Division |
| BTU | | British Thermal Unit |
| CAA | | Clean Air Act |
| CEM | | Continuous Emission Monitor |
| CO | ..... | Carbon Monoxide |
| DEQ | ..... | Department of Environmental Quality (Michigan) |
| EPA | ..... | Environmental Protection Agency |
| GPS | ..... | Global Positioning System |
| HAP | ..... | Hazardous Air Pollutant |
| MAERS | ..... | Michigan Air Emissions Reporting System |
| NAICS | ..... | North American Industrial Classification System |
| NOx | ..... | Nitrogen Oxides |
| Pb | ..... | Lead |
| ROP | ..... | Renewable Operating Permit |
| SCC | ..... | Source Classification Code |
| SIC | ..... | Standard Industrial Classification |
| SRN | ..... | State Registration Number |
| SOx | ..... | Sulfur Oxides |
| UTM | ..... | Universal Transverse Mercator <i>Grid Coordinates</i> |
| VOC | ..... | Volatile Organic Compounds |

The following definitions are provided to help you better understand the concepts in this workbook. For more information about these terms or for the legal definitions, please consult the Michigan Administrative Rules for Air Pollution Control (herein referred to as the Michigan Rules), specifically Michigan Rules R 336.1101 – R 336.1123.

Actual Emission: Amount of air contaminants emitted from a facility or emission unit over a given period of time, usually expressed as tons of air contaminant emitted per year (tons/yr).

Air Contaminant: A dust, fume, gas, mist, odor, smoke, vapor, or any combination thereof.

AQD Source ID: A system generated ID that the DEQ, Air Quality Division (AQD) uses to identify a stack, an emission unit, or a reporting group.

AQD Source ID (SRN): The alphanumeric State Registration Number (SRN) assigned by the AQD. AQD Source IDs are unique to a source and are comprised of a letter followed by four numbers; e.g. A1497.

Carbon Monoxide (CO): Colorless, odorless gas that is toxic because of its tendency to reduce the oxygen-carrying capacity of the blood. (See criteria pollutants.)

Control Device: Equipment that captures and/or destroys air contaminants, e.g. scrubber.

Criteria Pollutants: Pollutants for which National Ambient Air Quality Standards (NAAQS) are set. They include the following pollutants:

- Carbon Monoxide (CO)

- Lead (Pb)
- Nitrogen Dioxide (NO₂)
- Non-Methane Organic Compounds (NMOC)*
- Oxides of Nitrogen - NO_x (expressed as NO₂)
- Oxides of Sulfur - SO_x (expressed as SO₂)
- Particulate Matter (PM)
- Particulate Matter, Filterable {not water soluble} (PM,FLTRBLE)
- Particulate Matter, Sum of Condensables & Filterable (PM, PRIMARY)
- Particulate Matter, All Condensables & Filterable (PM,TOTAL)
- Particulate Matter less than 10 Microns (PM10)
- Particulate Matter less than 10 Microns, Filterable not water soluble (PM10,FLTRABLE)
- Particulate Matter less than 10 Microns, All Condensables & Filterable (PM10,TOTAL)
- Particulate Matter less than 2.5 Microns (PM2.5)
- Particulate Matter less than 2.5 Microns (PM2.5), Filterable not water soluble (PM2.5, FLTRBL)
- Particulate Matter less than 2.5 Microns (PM2.5), Sum of Condensables & Filterable (PM2.5, PRIMARY)
- Particulate Matter less than 2.5 Microns (PM2.5), All Condensables & Filterable (PM2.5, TOTAL)
- Sulfur Dioxide (SO₂)
- Total Non-Methane Organic Compounds (TNMOC)*
- Total Organic Compounds (TOC)*
- Volatile Organic Compounds (VOC) **

* These pollutants can be used as VOC surrogates if VOC emission factor is not available.

** Emissions of VOC contribute to ozone formation, for which a NAAQS has been set.

Device: (See also page 2-1) Any process equipment, control equipment, or stack.

Dismantle: To physically remove or render permanently inoperable.

Emission Factor: A factor that is used to estimate air emissions by multiplying it by the material throughput expressed in the appropriate unit code.

Emission Unit: (See also page 2-1) A device or group of devices that operate together with a dependency between devices and emits or has the potential to emit an air contaminant. An emission unit contains at least one process device and may contain control devices and related stacks.

Examples of an emission unit include:

- a single degreaser (degreaser only)
- a topcoat painting line (booths, ovens, incinerator, stacks)
- a chemical manufacturing process (reactors, condensers, dryers, baghouse, stacks)
- a coal-fired boiler (boiler, stack)

Emission Unit Activity: The flow of material into and out of processes or between devices that may discharge to the atmosphere. Materials are related to processes by Source Classification Codes (SCC).

Fee-Subject Facility: As defined in Section 324.5501(k) of Public Act 451 of 1994, as amended, certain sources of air pollutants are required to pay fees. In practice, these include major sources subject to the Renewable Operating Permit Program; sources subject to federal New Source Performance Standards; and area sources subject to National Emission Standards for Hazardous Air Pollutants.

Exempt Emission Unit: (See Rule 201 Exempt Emission Unit)

Grandfathered: With respect to Michigan permitting requirements, an emission unit installed prior to August 15, 1967 and not subsequently modified or reconstructed, is considered “grandfathered”.

Hazardous Air Pollutant (HAP): The 188 chemicals listed at 112(b) of the Clean Air Act.

Lead: A heavy metal that is hazardous to human health when breathed or swallowed. Its use in gasoline, paints, and plumbing compounds has been sharply restricted or eliminated by federal laws and regulations. (See criteria pollutants.)

Material: Any product or substance, including elements, compounds, or a mixture thereof, in any physical state (solid, liquid, gas) including more than one physical state at the same time, that flows through a process. Examples include fuel, coating, solvent, metal, grain, chemical, product.

Nitrogen Dioxide (NO₂): An oxide of nitrogen that is regulated because it can cause lung and eye irritation, can contribute to the formation of acid rain, and reacts in the atmosphere to form ozone and smog. (See criteria pollutants.)

Operator: A source representative that is responsible for the emission report's completeness and accuracy.

Operator's ID: (See also page 4-3) An identification assigned by a source representative. IDs will begin with a two-letter prefix plus a combination of up to 14 letters, numbers, or keyboard characters. Any combination of letters, numbers, and keyboard characters can be used to create IDs. Spaces are not allowed within the Operator's ID.

| <u>Operator's ID Prefix</u> | <u>Represents</u> |
|-----------------------------|--|
| EU | MAERS Operator's Emission Unit Prefix |
| RG | MAERS Operator's Reporting Group ID Prefix |
| SV | Operator's Stack/Vent ID Prefix |

Opt Out Permit: A Permit to Install that limits a facility's emissions to below the major source thresholds, thus avoiding the Renewable Operating Permit (ROP) Program.

Ozone: At ground level, ozone is a noxious pollutant and is the major component of smog. The source of ozone is the chemical reaction of volatile organic compounds (VOC) and nitrogen oxides (NO_x). Health effects of ozone are breathing problems, reduced lung function, asthma, eye irritation, stuffy nose, and reduced resistance to colds and other infections. Environmental effects of ozone can damage plants and trees. Smog also causes reduced visibility. Ozone is regulated by the control of VOCs and NO_x, which are precursors to ozone. (See criteria pollutants.)

Particulate Matter (PM): Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air emissions. (See Criteria Pollutants.)

Password: A four to eight alphanumeric character code created by the facility to verify ownership of the submitted data. AQD staff will check the password against the P-101 Signature and Password form before accepting the database. The password recorded on the P-101 form must be identical to the password entered in the software.

PM-10: Standard for measuring the amount of solid or liquid matter suspended in the atmosphere. PM-10 refers to the amount of particulate matter smaller than ten micrometers in diameter. The smaller PM-10 particles penetrate to the deeper portions of the lung, affecting sensitive population groups such as children and people with respiratory diseases.

Portable Source: A facility, process, or process equipment that commences operation and is located at a geographic site for not more than twelve consecutive months. These are not devices that are moved around within a stationary source (e.g., welding machines).

Process Device: Equipment or activity that generates air contaminants.

Remove from MAERS: A stack, emission unit, reporting group, or activity may be administratively removed from MAERS reporting requirements if the activity/emissions associated with the equipment fall below established thresholds, and reporting is not otherwise required.

Reporting Group: (See also page 2-5) An optional grouping of emission units created for simplification of reporting emissions. These emission units should have similar emission limits, stack parameters, operational parameters, emission factors, etc. For ROP's, the reporting groups should be consistent with the flexible group identified in the source ROP. Examples of reporting groupings include:

- A grouping of several emission units (for example, all of the coating lines or boilers) for an overall emission limit.
- A grouping of several emission units (for example, material handling systems or printing lines) with common activities and emission characteristics.

Rule 201 Exempt Emission Unit: (See also page 2-5) An emission unit that is specifically exempted from Rule 201 in Rules 279 –290 of the Michigan Air Pollution Control Rules and not subject to Rule 278.

SIC Code: The Standard Industrial Classification (SIC) code is a numerical indicator of the primary type of activity at a business. For example, 5153 is a grain elevator, 2951 is an asphalt plant, etc. The first two digits indicate the broad category; the second two digits are more industry specific.

Source: A facility or plant that contains an emission unit(s). A facility is assigned a State Registration Number (SRN) and has a physical location.

Source Classification Code (SCC): (See also page 2-6) An eight-digit numeric code used to describe an activity occurring at an emission unit or reporting group.

Stack: A conduit for air contaminants.

Sulfur Dioxide (SO₂): A heavy, pungent, colorless, gaseous air pollutant formed primarily by industrial fossil fuel combustion processes. (See criteria pollutants.)

Volatile Organic Compound (VOC): Any compound of carbon or mixture of compounds of carbon that participates in smog-formation reactions except for those listed in Rule 122(f) of The Michigan Air Pollution Control Rules that do not contribute appreciably to the formation of ozone.