

APPENDICES

APPENDIX A: Acronyms and Definitions, Michigan Specific

AQD	.....	Air Quality Division
BACT	.....	Best Available Control Technology
CAA	.....	Clean Air Act
CEM	.....	Continuous Emission Monitor
CO	.....	Carbon Monoxide
DEQ	.....	Department of Environmental Quality (Michigan)
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
PTI	.....	Permit to Install
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</i> <i>Coordinates</i>
VOC	.....	Volatile Organic Compounds

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 Condensibles & 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 Condensibles & Filterable (PM₁₀,TOTAL)
- Particulate Matter less than 2.5 Microns (PM_{2.5})
- Particulate Matter less than 2.5 Microns (PM_{2.5}), Filterable not water soluble (PM_{2.5}, FLTRBL)
- Particulate Matter less than 2.5 Microns (PM_{2.5}), Sum of Condensables & Filterable (PM_{2.5}, PRIMARY)
- Particulate Matter less than 2.5 Microns (PM_{2.5}), All Condensables & Filterable (PM_{2.5}, 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: 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: 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: 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.

Operator's ID Prefix Represents

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 (NOx). 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 NOx, 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: 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: 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): 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.

APPENDIX B: Rules

Mi State Rules

<http://www.michigan.gov/deq>, Laws and Rules

APPENDIX C: MEMOS, LETTERS, CHARTS

1. September 26, 1988 Delegation Letter for 40 CFR 52.21.
2. November 12, 1997 Memo "Crediting of Maximum Achievable Control Technology (MACT) Emission Reductions for New Source Review (NSR) Netting an Offsets".
3. EPA letter dated May 23, 2000, to Henry Nickel of Hunton & Williams concerning Detroit Edison and the Wisconsin Electric Power Company (WEPCO) case RMRR documents.
4. May 23, 2000, letter to Henry Nickel from Francis X. Lyons regarding the Monroe Power plant.
5. April 1998 Seitz Memo for staff
6. MDEQ's formal procedure for writing synthetic minor permits (internal guidance, effective 10/04/2001)
7. July 1, 1994 Seitz Memo regarding Pollution Control Projects and NSR Applicability
8. "Michigan Air Use Permit Technical Manual" and Air Quality Dispersion Modeling
9. June 21, 1996 Operational Memorandum regarding Stationary Source Determinations
10. September 18, 1989 guidance Memo "Request for Clarification of Policy Regarding the Net Emissions Increase"
11. Table K1, Summary of Michigan Auto Assembly Plant PSD Permit Issuance Timelines since September 30, 1997.
12. MDEQ Organizational Chart
13. Table K2, Average PTI Turn-Over Time (days)
14. "Overview of the NSR Process"
15. "MDEQ Standards"
16. MDEQ Director Harding's memorandum of May 24, 2001
17. Summary of the PTI approval process

APPENDIX D: Examples of Permits

1. Packaging Corporation of America, PTI B 3692
2. Holcim U.S. Inc, . PTI 60-710
3. Woodbridge Corporation, PTI 153-73D
4. Evaluation Form for the Daimler-Chrysler PTI 261-99A
Daimler-Chrysler PTI 261-99A Permit Conditions
5. Permit No. 283-01 for The Kellogg Company
6. Valley Asphalt Company, Inc., PTI 355-97A
7. Delphi Saginaw Steering Systems, PTI 143-02
8. General Permit.
9. Fact Sheet for Hillman Power Company's PTI No. 687-86G
10. General Motors - Delta Township, PTI No. 209-00
11. Permit 454-96C for Ford Motor Company
12. PTI 114-03 for Fairmount Minerals
13. Public Hearing Notice, PTI 535-96G for Quanex Corp.

APPENDIX E: PROGRAM TRAINING and PUBLIC PARTICIPATION MATERIALS

1. PTI workshops to community (flyers), newsletter "About the Air", fact sheet "Air Pollution Control 101"
2. October 2003 PSD Workshops (fliers and workbook)
3. DEQ "Calendar"
4. Extension of Public Comment Notification Example (Minergy Detroit, June 12, 2003)
5. NSR Public Notice Documents, copy from MDEQ's webpage
6. Employees Training Program
7. July 24, 2003 informational letter