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## 2011 MICHIGAN AIR EMISSIONS REPORTING SYSTEM (MAERS)

### INTRODUCTION

#### Submit Emissions Information by March 15, 2012

***SUBMITTAL OF EMISSIONS INFORMATION IS REQUIRED BY STATE LAW  
(Article I: Pollution Control, Chapter 1, Point Source Pollution Control, Part 55 of  
PA 451 of 1994, the Natural Resource and Environmental Protection Act. The  
penalty for non-completion or falsification of MAERS forms is a misdemeanor.)***

#### UPDATES FOR Emissions Inventory (EI) YEAR 2011

- Latitudes and longitudes that have been verified by AQD staff will be grayed out in the MAERS web based application and cannot be modified by the facility. If a verified latitude or longitude is incorrect, please send an e-mail to [INFOMAERS@Michigan.gov](mailto:INFOMAERS@Michigan.gov) with the correct information.
- The control device list has been updated. Obsolete control device codes have been mapped to acceptable codes. Facilities should verify the correct control devices are selected on the Emission Unit Form. The updated list of acceptable control device codes is available in the MAERS web based application or via the Internet at [www.michigan.gov/deqair](http://www.michigan.gov/deqair). Go to "Emissions," "Emissions Reporting," and then "MAERS Support Resources."
- Some emission unit types have been updated by AQD staff, please review each emission unit type and change as appropriate.
- All paper submittal MAERS forms have a new field. The field is the Inventory Year. The inventory year is the time period the facility is required to report emissions inventory. Example: 2011 is the Inventory Year 2011 for the 2011 MAERS report.
- MAERS workshops are offered throughout January and February. You can find more information and register online at [www.michigan.gov/deqworkshops](http://www.michigan.gov/deqworkshops)
- Be sure to check out the MAERS website for additional updates at [www.michigan.gov/deqair](http://www.michigan.gov/deqair). Go to "Emissions," then "Emissions Reporting."

As a reminder, sources with Renewable Operating Permits (ROPs) are required to certify their MAERS submittal using the Renewable Operating Permit Report Certification form (EQP 5736), signed by the source's Responsible Official. This is necessary in order to fully comply with the general conditions of the ROP. These sources are still required to complete the MAERS SB-101 Submit Form.

The Renewable Operating Permit Report Certification form (EQP 5736) is also available on the internet at [www.michigan.gov/deqair](http://www.michigan.gov/deqair). Select Permits; Renewable Operating Permits; ROP Forms & Application Software; Report Certification and Deviation Reporting. Then select "11/2004 Version of ROP Report Certification (EQP 5736)."

**Mailing Contents:**

New sources and paper submitters received a “brief” MAERS General Instructions Booklet and cover letter.

The entire MAERS General Instructions booklet is available on line at [www.michigan.gov/deqair](http://www.michigan.gov/deqair) (go to “Emissions,” then “Emissions Reporting,” and then “MAERS Support Resources.”) The booklet is divided into guides including Introduction, General Form Information, and Submittal Instructions and Table I. Each form has its own instructions and examples guide and blank forms. Fact sheets for calculating emissions are on our website at [www.michigan.gov/deqair](http://www.michigan.gov/deqair) (go to “Emissions,” then “Emissions Reporting.”)

**Submittal Options:**

Submittals of the 2011 MAERS information can be submitted via internet or by paper copy.

**Procedural Clarifications:**

Before starting the MAERS data entry, make sure that you have a copy of the previous year’s summary report or forms, for help in completing the MAERS 2011 emissions data.

You can contact your district office (see Table I) or contact the Environmental Assistance Center at [deq-assist@michigan.gov](mailto:deq-assist@michigan.gov) or 800-662-9278, to request that source-specific, partially completed, hard-copy forms be e-mailed or mailed to you. You will need to complete these hard-copy forms and mail them back to the appropriate district office for data entry. The Material Throughput amount on the A-101 form and all emission information on the E-101 Emissions form has been removed. The 2010 summary report/forms may help in completing the E-101 Emission forms. Also, for portable sources, the counties and their percentages have been removed.

**Reporting of T-Butyl Acetate:**

In the November 29, 2004 *Federal Register*, the EPA modified the federal definition of volatile organic compounds (VOCs) by excluding tertiary butyl acetate (TBAC) from the definition of VOC, because of its negligible level of reactivity with respect to ozone formation.

The EPA requires that TBAC remain subject to all federal recordkeeping, emissions reporting, and inventory requirements which apply to VOCs. The EPA believes that the use of TBAC as a substitute for other solvents could increase sharply, and that even “negligibly reactive” materials, when used in sufficient quantities, can contribute significantly to ozone formation. Industry will now be required to track and report TBAC emissions as a distinct class of emissions, separate from non-exempt VOCs. The same de minimus and thresholds used for VOCs should be used for TBAC.

At this time, if T-Butyl Acetate is used in any of the activities listed on the A-101 form, it should be reported as a separate pollutant on the Emissions form. In the pollutant code dropdown field choose “Tert-Butyl Acetate,” then enter the annual emissions in the annual emissions field.

## GENERAL INSTRUCTIONS

### **Authority:**

The annual emission inventory report is required by the administrative rules of the Michigan Department of Environmental Quality (DEQ) under authority of Article II: Pollution Control, Chapter 1, Point Source Pollution Control, Part 55 of PA 451 of 1994, the Natural Resources and Environmental Protection Act. Section 182 (a) (3) (B) of the Clean Air Act requires the development of an emission statement program by each state containing an Ozone Non-Attainment area. Also, a person who knowingly falsifies a report or fails to respond is guilty of a misdemeanor punishable by a fine of not more than \$10,000 per day, and imprisonment for not more than one year, for each violation. Therefore, by providing an annual emissions inventory report, a person certifies to the truth and accuracy based on belief, and to administrative completeness of the submittal by the deadline.

### **Who must file:**

Manufacturing, commercial, and institutional establishments are required to file an annual report for each location with source emissions for criteria pollutants as required per Rule 336.202, and as outlined in Operational Memorandum 13. Renewable Operating Permit (ROP) facilities, and those facilities that have opted out of the ROP program, are also required to report. Reporting should be in accordance with these general instructions and any supplemental instructions available for any specific industrial sector.

### **Reporting Period:**

Information is to be provided for calendar year 2011. This will require reporting of actual data for the period January 1, 2011 to December 31, 2011. If records of actual data are not available, estimates based on information and belief formed after reasonable inquiry are acceptable.

### **Reporting Requirements for Fugitive and Other Non-Stack Emissions:**

The requirement to report annual emissions includes fugitive and other non-stack emissions, as well as emissions from releases where the emissions are quantifiable. Some examples of specific instances where fugitive emissions must be reported are as follows:

- A source operates an emission unit with a permit or emission standard which regulates fugitive emissions.
- A source operates a process or process equipment described in an AQD fact sheet which requires calculation of fugitive emissions. Fugitive emissions shall be reported for the emission unit(s) to which the fact sheet applies.
- A source is listed in a specific source category identified as having fugitive emissions under the definition of potential to emit (Rule 116(m)).\*
- A source reports fugitive emissions to the Toxic Release Inventory.\*

Further information on fugitive emissions may be obtained from the following EPA websites:

- <http://www.epa.gov/ttn/chief/ap42> to search by source category; and
- <http://www.epa.gov/ttnchie1/le> to search by emission type.

To identify processes with fugitive emissions, select a document of interest on these websites. Select “find” while using the term “fugitive” for the specific emission type or source category.

Fugitive, non-stack, and release emissions must be considered when determining if a company is required to report emissions as specified in Operational Memo 13.\*\* These emissions must also be included when determining whether to report emissions from exempt processes or process equipment under Rule 212(7).

Note that AQD may require reporting of a specific air contaminant if such reporting is considered by the department as necessary (and is specifically requested by the department) for the proper management of the air resources (Rule 2).

*\* For exempt processes referenced in Rule 212(7), reporting is required if the process is subject to a process-specific emission limitation or standard or if the total emissions from the process exceed 10% of the significance levels\*\*\* described in the following table.*

### **REPORTING THRESHOLDS**

Pollutant	** Operational Memorandum 13 Thresholds (per facility)	*** Rule 212(7) “10% of significant thresholds (per process), for fee-subject emissions from specified exempt processes
Carbon monoxide	100 tons/year	10 tons/year
Nitrogen oxides	40 tons/year	4 tons/year
Sulfur dioxide	40 tons/year	4 tons/year
PM	25 tons/year	2.5 tons/year
PM-10	15 tons/year	1.5 tons/year
VOCs	10 tons/year	4 tons/year
Lead	0.6 tons/year	0.06 tons/year

## BEFORE YOU BEGIN

Before you begin your MAERS report, have all the information needed to fill out the forms available ahead of time. The table below lists some of the items that may be required to complete the MAERS forms.

### MAERS CHECK LIST

- Computer with Internet access (recommended)
- SRN (State Registration Number) – this is the number that appears on all your permits & correspondence with the AQD
- Paper copy of last year's submittal
- 2011 MAERS General Instructions Examples and Reference Tables
- Calculator
- Air Use Permits, Consent Orders, or Consent Judgments
- MSDS, data sheets, specification sheets, etc. for equipment and materials used at facility
- Year 2010 purchase records
- Plant layout map
- List of emission units at facility
- Any testing or recordkeeping data
- Material usage logs
- Other guidance documents (fact sheets, workbooks, etc.)
- Renewable Operating Permit Report Certification (Form EQP 5736; only sources with a ROP)

## Reporting Options

The Michigan Air Emissions Reporting System (MAERS) is a web-based system that allows emissions inventory information to be submitted by the company "Primary Preparer." The Primary Preparer will receive a user ID and PIN after registering with the DEQ Air Quality Division. The data may be completed by a "Preparer," which may be company personnel, consultant, etc. The Primary Preparer acknowledges that the data is true and accurate to his best knowledge.

A submittal may be prepared using the MAERS web-based application or a paper report may be submitted for those without internet access.

### **Benefits of Filing MAERS Electronically:**

- Majority of data is prefilled.
- Review of "MAERS Report Site Map" enables an overall view of forms.
- More accurate way to submit data (typographical errors).
- Use of completeness checker improves accuracy and assures that submittal is acceptable.
- Electronic tools to assist sources: calculator, utility reports, etc.
- Paper copies of reports and forms can be printed for future use.
- Faster submittal.

### **MAERS Web-based Submittals:**

Web based submittals done by a consultant (when the company does not have internet access) will not be considered administratively complete until a completed PPP-101 Primary Preparer Proxy form signed by the company is received in Lansing. The mailing address is: Michigan DEQ, Air Quality Division, Attn: MAERS Administrator, P.O. Box 30260, Lansing, MI 48909-7760.

Sources with ROPs must submit a certification that the submittal is true, accurate and complete by including a Renewable Operating Permit Report Certification (Form EQP 5736) located on the web or in the General Instructions and Forms booklet, signed by the source's Responsible Official. The EQP 5736 should be sent to your district office.

### **Paper Submittals:**

A copy of the 2010 MAERS Source Summary Report/Forms may be helpful in completing the forms. Requests for this report can be made by contacting the appropriate AQD district office

Paper Forms Assembly Flow:

- Source Forms (S-101 and S-102)
- Stack Forms (SV-101)
- Emission Unit Forms (EU-101)
- Reporting Group Forms - optional (RG-101)
- Activity Forms (A-101)
- Supplemental Portable form (SP-101) \*\*For portable sources only

- Emissions Forms (E-101)
- Preparer Form – optional (P-101)
- Submit Form (SB-101)
- ROP Certification (Form EQP 5736) \*\*For ROP sources only

Before submitting, review all forms for completeness and accuracy. **SUBMIT ALL PAPER COPY FORMS TO THE APPROPRIATE AQD DISTRICT OFFICE LISTED in Figure 1 or Table I.**

Additional forms will be needed to report all required data for paper submittals. Photocopy the original blank forms (located in the back of these instructions) as needed. If additional blank forms are needed, they may be downloaded from the MAERS Homepage at [www.michigan.gov/degair](http://www.michigan.gov/degair). Go to “Emissions,” “Emissions Reporting,” and then “MAERS Support Resources.” If assistance is needed, contact your AQD district office by e-mail or phone.

For a paper submittal to be considered administratively complete, a completed Submit form (SB-101), along with any required emission/calculation documentation, must be mailed to the district office. If not using the new MAERS system, use Figure 1 or Table I (to locate the county name in which the source is physically located to determine the appropriate district office). For portable sources operating at locations in multiple districts, submit data to the district office responsible for the county where the S-101 Source form address is located, which should be the company’s home office address. Portable sources submitting emissions information on paper must submit the SP-101 Supplemental Portable form along with the SB-101 Submit form for the submittal to be considered administratively complete. Sources with ROPs must include certification that the submittal is true, accurate and complete by including a Renewable Operating Permit Report Certification (Form EQP 5736 located in the back of this booklet), signed by the source’s Responsible Official.

**Related Reference Information:**

The following reference information is available in the MAERS web based application or via the Internet at [www.michigan.gov/deqair](http://www.michigan.gov/deqair). Go to “Emissions,” “Emissions Reporting,” and then “MAERS Support Resources.” If unable to get the information from these sources, contact your AQD district office (refer to Figure 1 or Table I) via e-mail or phone. Information may be available in paper form upon request.

Control Device Codes  
Emission Calculation Fact Sheets  
Horizontal Reference Datum Codes  
Horizontal Collection Method Codes  
Reference Point Code  
MAERS Emission Factors  
MAERS Software Users Guide  
NAICS Codes  
Pollutant/Material Codes  
Reference Point Codes  
SCC Listing  
Fact Sheets

The DEQ’s Office of Environmental Assistance has prepared a MAERS Workbook with examples of how to calculate emissions. You can access the *MAERS Workbook* and the *Calculating Air Emissions for MAERS Guidebook* at [www.michigan.gov/deqair](http://www.michigan.gov/deqair) (go to “Clean Air Assistance.”)

## Definitions

**AQD Emission ID:** A system generated ID that the DEQ-AQD uses to identify an emission unit. Facilities submitting MAERS reports in paper format for the first time should leave the AQD Emission Unit ID blank, the AQD Emission Unit ID will be generated by the MAERS application.

**AQD Reporting Group ID:** A system generated ID that the DEQ-AQD uses to identify Reporting Groups. Facilities submitting MAERS reports in paper format for the first time should leave the AQD Reporting Group ID blank, the AQD Reporting Group ID will be generated by the MAERS application.

**AQD Source ID (SRN):** A source is assigned an AQD Source ID by DEQ-AQD. This number is also called a State Registration Number (SRN).

**AQD Stack ID:** A system generated ID that the DEQ-AQD uses to identify a stack. Facilities submitting MAERS reports in paper format for the first time should leave the AQD Stack ID blank, the AQD Stack ID will be generated by the MAERS application.

**Criteria Pollutants:** Criteria Pollutants are those for which National Ambient Air Quality Standards (NAAQS) are set. The following pollutants must be reported because (1) they are a criteria pollutant or (2) because they result in the formation of a criteria pollutant. The material code is listed in the priority of the most preferable designation and may vary from activity to activity due to available EPA emission factors.

<b><u>Pollutant</u></b>	<b><u>Material Code</u></b>
Ammonia	AMMONIA
Carbon Monoxide	CO
Lead	LEAD
Oxides of Nitrogen (expressed as NO <sub>2</sub> )	NOX
Nitrogen Dioxide	NO2
Particulate Matter less than 10 Microns (Primary)	PM10,PRIMARY
Particulate Matter less than 10 Microns (Total)	PM10,TOTAL
Particulate Matter less than 10 Microns	PM10
Particulate Matter less than 10 Microns (Filterable)	PM10,FLTRBLE
Particulate Matter less than 2.5 Microns (Primary)	PM2.5,PRIMRY
Particulate Matter less than 2.5 Microns (Total)	PM2.5,TOTAL
Particulate Matter less than 2.5 Microns	PM2.5
Particulate Matter less than 2.5 Microns (Filterable)	PM2.5,FLTRBL
Sulfur Dioxide	SO2
Oxides of Sulfur (expressed as SO <sub>2</sub> )	SOX
Volatile Organic Compounds	VOC
Non-Methane Organic Compounds *	NMOC
Total Non-Methane Organic Compounds *	TNMOC
Total Organic Compounds *	TOC

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

**Device:** Any process equipment, control equipment, or stack, on or within which, one or more processes can occur or a pollutant is exhausted into ambient air.

**Dismantle:** To physically remove or render permanently inoperable.

**Emission Factor:** A factor used to multiply against the material throughput and its unit code to get resultant pollutants emitted.

**Emission Unit:** An emission unit is 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 would 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, control device)

**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 (SCCs).

**EU ID:** Emission Unit (EU) Identification assigned by a source representative. EU ID's will begin with a two-letter prefix (**EU**) 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 ID's.

**Note: If you have an ROP (Renewable Operating Permit), verify that your MAERS submittal accurately reflects the organization of your current ROP with regard to emission units (EUs). The naming convention for EU's in your ROP should be carried over to MAERS. This will simplify the process in the future.**

**Fee-Subject Facility:** As defined in Section 324.5501(k) of Michigan's Natural Resources and Environmental Protection Act, NREPA 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.

**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".

**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 (fuel, coating, solvent, metal, grain, chemical, product).

**Password:** An 8 alphanumeric character code created by MAERS System. This password may be changed by going to the “My Account”, change password area.

**Pin:** A 4 to 8 alphanumeric character code created by the MAERS System for electronic submittals. This pin will be assigned when the MAERS Administrator receives the Primary Preparer’s electronic signature agreement.

**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 (e.g., asphalt batch plant). These are not devices that are moved around within a stationary source (e.g., forklifts, welding machines).

**Preparer:** A company employee or consultant that prepares the MAERS report for the Primary Preparer to approve and submit to AQD.

**Primary Preparer:** A source representative that is responsible for the emission report’s completeness and accuracy.

**Remove from MAERS:** An activity can be administratively removed from MAERS reporting requirements if activity/emissions fall below established thresholds, and reporting is not otherwise required.

**Reporting Group:** Reporting Group (RG) Identification assigned by a source representative. RG ID’s will begin with a two-letter prefix (**RG**) 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 ID’s. A reporting group is 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. 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:** With respect to MAERS, an emission unit is considered “Rule 201 exempt” when it is not grandfathered from Rule 201 permitting requirements; is not included in a permit to install, opt out permit, or Renewable Operating permit; is identified in Rules 280 through 290 of the Michigan Air Pollution Control Rules; and is not excluded from exemption per the provisions of Rule 278.

**Rule 208a-Registered Source:** A stationary source that has opted out of ROP program requirements by limiting the source’s potential to emit pollutants by following the registration process established by Rule 208a.

**Secondary Preparer:** A company employee or consultant that prepares the MAERS report for the Primary Preparer to approve and submit to AQD.

**Source:** A facility or plant that contains an emission unit(s). A facility is assigned an AQD Source ID (SRN) and has a physical location.

**Stack ID:** A stack identification assigned by a source representative. Stack ID's will begin with a two-letter prefix (**SV**) 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 ID's.

## ACRONYMS

AQD	Air Quality Division	PASS-ROP	Permit Application Submittal System for Renewable Operating Permits
CEM	Continuous Emission Monitor	PM	Particulate Matter
CO	Carbon Monoxide	ROP	Renewable Operating Permit
DEQ	Department of Environmental Quality	R208a	Rule 208a (R 336.1208a)
EPA	Environmental Protection Agency	SCC	Source Classification Code
GPS	Global Positioning System	SIC	Standard Industrial Classification
HAP	Hazardous Air Pollutant	SO2	Sulfur Dioxide
MAERS	Michigan Air Emissions Reporting System	SRN	State Registration Number
NAAQS	National Ambient Air Quality Standards	TNMOC	Total Non-Methane Organic Compounds
NAICS	North American Industrial Classification System	TOC	Total Organic Compounds
NMOC	Non-Methane Organic Compounds	VOC	Volatile Organic Compounds
NOX	Oxides of Nitrogen		