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MICHIGAN AIR EMISSIONS REPORTING SYSTEM (MAERS)

SV-101 STACK FORM INSTRUCTIONS AND EXAMPLE

Use this form to record information about each individual stack that is connected to an emission unit reported on the EU-101 Emission Unit Form(s). Stack information must be reported for all stacks connected to emission units with actual emissions of any pollutant equal to or greater than the following threshold levels:

<u>POLLUTANT</u>	<u>THRESHOLD LEVEL TONS PER YEAR</u>
Carbon monoxide (CO)	100
Nitrogen oxides (NOX)	40
Sulfur dioxide (SO2)	40
Particulate matter (PM)	25
Particulate matter < 10 microns (PM10)	15
Volatile organic compounds (VOC)	10
Lead (Lead)	00.6

These threshold levels refer to the amount of emissions per emission unit, not per stack. For example, if one emission unit has six stacks and individually each stack is below the threshold level, but when combined the threshold level is exceeded, the stacks must be reported.

NEED HELP? If you are unsure if your emission unit (EU) exceeds the threshold, complete the emissions form (E-101) first to determine if the stack emissions exceed any of the threshold levels above.

NOTE: It is highly recommended that facilities subject to the ROP program report all stacks with applicable requirements. Stacks with applicable requirements must be reported in the ROP renewal application. If these stacks are reported in MAERS you will not have to complete SV-101 forms in your ROP application.

INVENTORY YEAR

1. **Inventory Year** – the inventory year is the time period the facility is required to track and report emissions data. Example: 2011 is the inventory year for the 2011 MAERS report, which is due March 15, 2012.

FORM REFERENCE SECTION:

2. **Form Type** - DEQ Air Quality reference identification for the form.
3. **AQD Source ID (SRN) – (Required)** - AQD Source ID (SRN) is where the SRN must be entered. This number is also called a State Registration Number (SRN).

STACK IDENTIFICATION SECTION:

The Operator's Stack ID must be unique for each stack at the source.

4. **AQD Stack ID** - Air Quality Division generated ID.
5. **Stack ID - (Required Field)** Create a unique ID for each stack; refer to the previous year MAERS Source Summary Report for previously used Stack ID.
6. **Remove from MAERS** - If the stack falls below the threshold levels listed on page 1 or the stack was dismantled prior to the reporting year select "YES". If the stack threshold levels are above the levels listed on page 1 select "NO".
7. **Dismantle Date** - Report the date this stack was permanently removed or rendered inoperable reporting year. If the stack has been dismantled, Fields 8 through 20 are not required. For portable sources, the dismantle date must be blank. If a 2011 dismantle date is entered, then Field 6 Remove from MAERS must be "NO".
8. **Stack Description** - Provide a brief description of the stack (optional field).
9. **Actual Stack Height** - Enter the height of the stack in feet from the ground upward.
10. **Inside Stack Diameter** - If the stack is circular, enter the inside diameter in inches at the top of the stack. If the stack is rectangular, convert the area inside of the stack to circular diameter using the following procedure.
 - A) Obtain the length and width in inches.
 - B) Calculate the area by multiplying the length times the width.
 - C) Divide the area by 3.14 (π).
 - D) Take the square root of the value from step C to obtain the radius.
 - E) Calculate the diameter by multiplying the radius (from step D) by 2.
 - F) Enter the diameter (from step E) in Field 10.

11. **Exit Gas Temperature** - Enter stack exit gas temperature in degrees Fahrenheit.
12. **Actual Exit Gas Flow Rate** - Enter the stack exhaust volume and actual cubic feet per minute, at actual operating load and temperature.
13. **Stack Orientation** - Select the appropriate Stack Orientation.

Field 14 through Field 20. (Portable sources should leave these fields blank.)
The tables for several of the fields are listed below. New sources can obtain latitude and longitude location information via USGS maps, GPS, or from websites such as Microsoft Terraserver www.terraserer.microsoft.com, Google Earth <http://earth.google.com/index.html>, or the U.S. EPA TRI Facility Siting Tool www.epa.gov/tri/report/siting_tool/index.htm.

14. **Latitude** – Enter the Latitude in decimal degrees.
15. **Longitude** – Enter the Longitude in decimal degrees.
16. **Horizontal Collection Method** – Enter the collection method used to determine the LAT/LONGS listed above. Horizontal Collection table is listed below. A helpful hint is to assume that they were originally determined by code 001, which indicates “Geographic coordinate determination method based on address matching house number”. **If using the TRI siting tool, select code 030 for this field. If using the Google Earth or Terraserver, select 007 or 027.** If using a hand-held global positioning system (GPS) unit, there are GPS collection methods (codes 012-017) available.

HORIZONTAL COLLECTION METHOD CODE	HORIZONTAL COLLECTION METHOD CODE DESCRIPTION
001	The geographic coordinate determination method based on address matching-house number.
002	The geographic coordinate determination method based on address matching-block face.
003	The geographic coordinate determination method based on address matching-street centerline.
004	The geographic coordinate determination method based on address matching-nearest intersection
005	The geographic coordinate determination method based on address matching-primary name.
006	The geographic coordinate determination method based on address matching-digitized.
007	The geographic coordinate determination method based on address matching-other.
008	The geographic coordinate determination method based on census block-1990-centroid.
009	The geographic coordinate determination method based on census/group-1990-centroid.
010	The geographic coordinate determination method based on census/tract-1990-centroid.
011	The geographic coordinate determination method based on census-other.
012	The geographic coordinate determination method based on GPS carrier phase static relative positioning technique.
013	The geographic coordinate determination method based on GPS carrier phase kinematic relative positioning technique.
014	The geographic coordinate determination method based on GPS code measurements (pseudo range) differential (DGPS).
015	The geographic coordinate determination method based on GPS code measurements (pseudo range) precise positioning service.
016	The geographic coordinate determination method based on GPS code measurements (pseudo range) standard positioning service (SA Off).
017	The geographic coordinate determination method based on GPS code measurements (pseudo range) standard positioning service (SA On).
018	The geographic coordinate determination method based on interpolation-map.
019	The geographic coordinate determination method based on interpolation-photo.
020	The geographic coordinate determination method based on interpolation-satellite.
021	The geographic coordinate determination method based on interpolation-other.
022	The geographic coordinate determination method based on Loran C.
023	The geographic coordinate determination method based on public land survey quarter of a section.
024	The geographic coordinate determination method based on public land survey section.
025	The geographic coordinate determination method based on classical surveying techniques.
026	The geographic coordinate determination method based on zipcode-centroid.
027	The information is not known.
028	Global Positioning Method, with unspecified parameters.
029	GPS Code Measurements (pseudo range) Standard Positioning Service Corrected using Canadian Active Control System.
030	The geographic coordinate determination method is based on a digital map source (TIGER).
031	The geographic coordinate determination method uses SPOT (Système Probatoire d
032	The geographic coordinate determination method is based on the use of a Multi-Spectral Scanner (MSS).
033	The geographic coordinate determination method is based on the use of a Thematic Mapper (TM).
034	The geographic coordinate determination method is based on a public land survey, an eighth of a section.
035	The geographic coordinate determination method is based on a public land survey, a sixteenth of a section.
036	The geographic coordinate determination method is based on a public land survey footing.
037	The center of an area defined by the 5-digit ZIP code and its 4-digit geographic segment extension.
038	The center of an area defined by the 5-digit ZIP code and its 2-digit geographic segment extension.

- 17. Source Map Scale Number** – Enter the scale of the map used. Only required if code 18, which indicates the Horizontal Collection Method was determined by an interpolation map.

18. **Horizontal Accuracy Measure** – Enter the accuracy measure of the collection method and report in meters, based on the map or GPS used. **If using any of the websites listed on page 3, enter 25 meters.**
19. **Horizontal Reference Datum Code** – Enter the Datum Code used to determine the LAT/LONGS. This code should be listed in the instruction booklet from the GPS to determine the LAT/LONGS. **If using any of the websites listed on page 3, select code 002.** See table below.

HORIZONTAL REFERENCE DATUM CODE	HORIZONTAL REFERENCE DATUM CODE DESCRIPTION
001	North American Datum of 1927
002	North American Datum of 1983
003	World Geodetic System of 1984

20. **Reference Point Code** – Choose the option that best describes where these LAT/LONGS were taken. For instance, if using code 001 in Field 16 above, which indicated matching house address, reference point code 106 “Point where substance is released” may be used. If using a GPS, wherever you were standing when reading the GPS that best matches the options in the table listed below or in the dropdown of the MAERS software.

REFERENCE POINT CODE	REFERENCE POINT CODE DESCRIPTION
101	Entrance point of a facility or station.
102	Center of a facility or station.
103	Facility/monitoring site boundary point.
104	Point where substance enters facility/monitoring site (can be inside or outside of a facility/site).
105	Point where substance is processed, treated, settled, or stored.
106	Point where a substance is released.
107	Point where a substance is monitored.
108	Points not represented by 101-107.

- 21A.-21B. **Bypass Stack Declaration** - Is this a bypass stack only? Select the appropriate box. If “YES” is selected in Field 21A, then list the Operator’s Stack ID in Field 21B for the stack that this vent bypasses.



Michigan Department of Environmental Quality - Air Quality Division
Michigan Air Emissions Reporting System (MAERS)
SV-101 STACK

1. INVENTORY YEAR
2011

Authorized under 1994 P.A. 451, as amended. Completion of information is required. Civil and/or criminal penalties possible for providing false information.

GENERAL INSTRUCTIONS: Refer to last year's MAERS forms or summary report for information previously submitted, and complete this form with additions or corrections as necessary. For more detailed instructions refer to the MAERS General Instructions Booklet. This MAERS form is used to report stacks for a specific inventory year. Enter the specific inventory year in field 1.

FORM REFERENCE	
2. Form Type SV-101	3. AQD Source ID (SRN) A1234

STACK IDENTIFICATION		<input type="checkbox"/> Change	<input checked="" type="checkbox"/> Add
4. AQD Stack ID SV0001	5. Stack ID SVCOATING	6. Remove from MAERS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Dismantle Date (MM/DD/YYYY)
8. Stack Description Coating line stack			
9. Actual Stack Height Above Ground 50 feet	10. Inside Stack Diameter 6 inches		
11. Exit Gas Temperature 80 degrees Fahrenheit	12. Actual Exit Gas Flow Rate 35 cubic feet per minute		
13. Stack Orientation <input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Vertical with No Loss Sleeve <input type="checkbox"/> Vertical with Conical Cap <input type="checkbox"/> Horizontal <input type="checkbox"/> Goose Neck Downward			
14. Latitude 42.45362145 Decimal Degrees	15. Longitude -83.12578356 Decimal Degrees	16. Horizontal Collection Method 001	
17. Source Map Scale Number	18. Horizontal Accuracy Measure 100 Meters		
19. Horizontal Reference Datum Code 002	20. Reference Point Code 106		
21A. Bypass Stack Only <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21B. If yes, operator ID of main stack		

STACK IDENTIFICATION		<input type="checkbox"/> Change	<input type="checkbox"/> Add
4. AQD Stack ID	5. Stack ID SV	6. Remove from MAERS <input type="checkbox"/> Yes <input type="checkbox"/> No	7. Dismantle Date (MM/DD/YYYY)
8. Operator's Stack Description			
9. Actual Stack Height Above Ground feet	10. Inside Stack Diameter inches		
11. Exit Gas Temperature degrees Fahrenheit	12. Actual Exit Gas Flow Rate cubic feet per minute		
13. Stack Orientation <input type="checkbox"/> Vertical <input type="checkbox"/> Vertical with No Loss Sleeve <input type="checkbox"/> Vertical with Conical Cap <input type="checkbox"/> Horizontal <input type="checkbox"/> Goose Neck Downward			
14. Latitude Decimal Degrees	15. Longitude Decimal Degrees	16. Horizontal Collection Method	
17. Source Map Scale Number	18. Horizontal Accuracy Measure Meters		
19. Horizontal Reference Datum Code	19. Reference Point Code		
21A. Bypass Stack Only <input type="checkbox"/> Yes <input type="checkbox"/> No	21B. If yes, operator ID of main stack		