



Michigan Air Emissions Reporting System (MAERS)

HAZARDOUS AIR POLLUTANT EMISSIONS CALCULATOR

For 2016 (2015 MAERS), the emissions estimator has been enhanced to improve the hazardous air pollutant (HAP) estimates generated by the MAERS System. Each HAP estimate is created following a tiered procedure. The procedure invokes each tier in series (Tier 1 – 5), once an estimate is calculated, the subsequent tiers are ignored.

| Tier | Description | | | | | | | | | | |
|-----------------|--|-----------------|-----------|--------------------------|----------|--------------------------|--|--|--|--|--|
| <p>1</p> | <p>Facility Specific Emission Factor</p> <p>The MAERS Coordinator can add facility specific hazardous air pollutant (HAP) emission factors for specific activities/SCC codes. Identification and approval of appropriate facility specific emissions factors is done through consultation with technical AQD staff. The emissions inventory contact or the primary preparer for a facility can identify facility specific HAP emission factors for consideration by sending the specific requests, including supporting documentation, to infomaers@michigan.gov. Request should be made as soon as possible in order to be considered for the next MAERS Reporting season. Requests made after November 1st will not be included in the next MAERS report.</p> <p>Information required for facility specific factors:</p> <table border="1" data-bbox="347 1047 1430 1115"> <thead> <tr> <th data-bbox="347 1047 565 1115">SCC code</th> <th data-bbox="565 1047 781 1115">Pollutant</th> <th data-bbox="781 1047 997 1115">Emission Factor</th> <th data-bbox="997 1047 1213 1115">Exponent</th> <th data-bbox="1213 1047 1430 1115">Supporting Documentation</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>Where facility specific emission factors are supplied, the emissions calculator will use the facility specific emission factor for that pollutant.</p> | SCC code | Pollutant | Emission Factor | Exponent | Supporting Documentation | | | | | |
| SCC code | Pollutant | Emission Factor | Exponent | Supporting Documentation | | | | | | | |
| | | | | | | | | | | | |
| <p>2</p> | <p>Controlled HAP Emission Factor, SCC, pollutant, and control device match</p> <p>If there is a MAERS emission factor that matches the SCC, pollutant and control device, the emissions calculator will use the controlled emission factor instead of the uncontrolled factor.</p> <p>See MAERS System Utilities for list of controlled Emission Factors or go to MAERS On-line Resources, MAERS Reference Tables, MAERS Emission Factor Table http://www.michigan.gov/documents/deq/deq-aqd-eval-era-MAERS-EMISSION-FACTOR-TABLE_408342_7.xls</p> | | | | | | | | | | |
| <p>3</p> | <p>Uncontrolled HAP Emission Factor using particulate matter control efficiency provided by facility user</p> <p>If there is a control efficiency entered on the Activity and Emissions Form, Emissions tab for any criteria emission form of particulates (Group A), the entered control efficiency will also be applied along with the uncontrolled emission factor for pollutants in Group B listed on page 3, if applicable.</p> | | | | | | | | | | |



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| Tier | Description |
|------|--|
| 4 | <p>Uncontrolled MAERS HAP Emission Factor using default control efficiency</p> <p>If there is a MAERS emission factor, the emissions calculator will use the default control efficiency for the pollutant and control device if applicable.</p> <p>See http://www.michigan.gov/documents/deq/deq-aqd-era-haps_tier4_default_ce_pollutant_508584_7.pdf for a list of pollutant and control device default control efficiencies. The default control efficiencies were compiled by performing a literature review.</p> |
| 5 | <p>Uncontrolled MAERS HAP Emission Factor</p> <p>If there is an uncontrolled MAERS emission factor for the specific SCC and pollutant, the emissions calculator will use the MAERS emission factor, no control efficiency is applied.</p> |

See the Emission Comparison – SCC Detail Report under AQD Calculated Emissions to see which tier was used to perform the HAPs emission calculation.

Michigan Air Emissions Reporting System (MAERS)
Emissions Comparison - SCC Details

AQD Source ID (SRN): Z9001 Reporting Year: 2015
 Source Name: Z9001
 Source Locations: 555 W MAIN STREET , LANSING, MI, 48909

| AQD Emission Unit ID | RG0015 | Emission Unit ID | RG-OVENS/BOILER | Dismantle Date | Remove Date | | | | | | | | | |
|---------------------------|---------------------------|------------------|-----------------|---------------------|-------------|-------------|------------|---------|--------------------------|------------|----|-----|----|---------|
| SCC Code | SCC Reference Description | Remove Date | Material Code | Material Throughput | Unit Code | VOC Wt% | Sulfur Wt% | Ash Wt% | Density | | | | | |
| 10200602 | 10-100 Million Btu/hr | | NATURAL GAS | 555 | MMCF | | | | | | | | | |
| SOURCE REPORTED EMISSIONS | | | | | | | | | | | | | | |
| Pollutant | Amount | Unit | Emiss Basis | Factor | Exp | Factor Unit | Cnt% | Tier | AQD CALCULATED EMISSIONS | | | | | |
| AMMONIA | 1776.0000 | LB | MAERS EF | 3.2 | 0 | LB/MMCF | | 5 | AMMONIA | 1776.0000 | LB | 3.2 | 0 | LB/MMCF |
| CO | 46620.0000 | LB | MAERS EF | 8.4 | 1 | LB/MMCF | | 5 | CO | 46620.0000 | LB | 8.4 | 1 | LB/MMCF |
| LEAD | 0.2800 | LB | MAERS EF | 5 | -4 | LB/MMCF | | 5 | LEAD | 0.2800 | LB | 5 | -4 | LB/MMCF |
| NOX | 55500.0000 | LB | MAERS EF | 1 | 2 | LB/MMCF | | 5 | NOX | 55500.0000 | LB | 1 | 2 | LB/MMCF |
| PM10,PRIMARY | 4218.0000 | LB | MAERS EF | 7.6 | 0 | LB/MMCF | | 5 | PM10,PRIMARY | 4218.0000 | LB | 7.6 | 0 | LB/MMCF |
| PM2.5,PRIMARY | 4218.0000 | LB | MAERS EF | 7.6 | 0 | LB/MMCF | | 5 | PM2.5,PRIMARY | 4218.0000 | LB | 7.6 | 0 | LB/MMCF |
| SO2 | 333.0000 | LB | MAERS EF | 6 | -1 | LB/MMCF | | 5 | SO2 | 333.0000 | LB | 6 | -1 | LB/MMCF |
| VOC | 3052.5000 | LB | MAERS EF | 5.5 | 0 | LB/MMCF | | 5 | VOC | 3052.5000 | LB | 5.5 | 0 | LB/MMCF |
| ACENAPHTHEN | | LB | | | | | | 5 | ACENAPHTHEN | 0.0009990 | LB | 1.8 | -6 | LB/TON |
| ACENAPHTHYL | | LB | | | | | | 5 | ACENAPHTHYL | 0.0009990 | LB | 1.8 | -6 | LB/TON |
| ANTHRACENE | | LB | | | | | | 5 | ANTHRACENE | 0.001332 | LB | 2.4 | -6 | LB/TON |
| ARSENIC | | LB | | | | | | 5 | ARSENIC | 0.1110 | LB | 2 | -4 | LB/TON |
| BENZ(A)ANTHR | | LB | | | | | | 5 | BENZ(A)ANTHR | 0.0009990 | LB | 1.8 | -6 | LB/TON |

If you have questions related MAERS HAPs emission calculator, please send an e-mail to infomaers@michigan.gov or call the Environmental Assistance Center at 1-800-662-9278.



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SUBSTANCES SUBJECT TO PARTICULATE MATTER CONTROL EFFICIENCY

| Group A | Group B |
|--------------|--------------|
| PM10,PRIMARY | ANTIMONY |
| PM10,FLTRBLE | ARSENIC |
| PM2.5,PRIMRY | ASBESTOS |
| PM2.5,FLTRBL | BENZ(GHI)PE |
| | BERYLLIUM |
| | CADMIUM |
| | CALCIUM |
| | CHROMIUM |
| | CHROMIUM VI |
| | COBALT |
| | COPPER |
| | LEAD |
| | MANGANESE |
| | NICKEL |
| | PM10,PRIMARY |
| | PM2.5,PRIMRY |
| | SELENIUM |