

**STATE OF MICHIGAN**

Rick Snyder, Governor



**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**AIR QUALITY DIVISION**

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**PUBLIC PARTICIPATION DOCUMENTS**

For

Extruded Metals, Inc.  
(a Mueller Industries Co.)  
302 Ashfield Street  
Belding, Michigan

**PERMIT APPLICATION NUMBER**

**16-11**

**AUGUST 29, 2011**

## **FACT SHEET**

AUGUST 29, 2011

### **Purpose and Summary**

The Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), is proposing to act on Permit to Install (PTI) application No. 16-11 from Extruded Metals, Inc., a Mueller Industries Co. (hereinafter referred to as "Extruded Metals, Inc.") The permit application is for demonstrating compliance with the revised National Ambient Air Quality Standard (NAAQS) for lead for the existing brass processing and extrusion processes. The existing facility is subject to permitting requirements of the Department's Rules for Air Pollution Control and federal regulations.

Additionally, the AQD is proposing entry of a consent order with Extruded Metals, Inc. to resolve alleged air pollution violations of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451) and PTI No. 505-93. Specifically, the facility has exceeded the emission limits for lead, particulate matter and hydrogen chloride for the West Chip Dryer as contained in PTI No. 505-93. Compliance testing conducted on September 28-30, 2009, at the request of the AQD, documented the emission limit exceedances.

Prior to acting on this application, the AQD is holding a public comment period and a public hearing to allow all interested parties the opportunity to comment on the proposed PTI and consent order. All relevant information received during the comment period and hearing will be considered by the decision maker prior to taking final action on the application.

### **Background Information**

Extruded Metals, Inc. operates a brass casting, extrusion and finishing plant located at 302 Ashfield Street in Belding, Michigan. This manufacturing plant is located on the northeast side of the city of Belding with the nearest homes located directly across the street to the east of the facility. There are approximately 40 homes located within 750 feet of the facility and over 200 homes located within a half-mile radius of the facility.

The facility produces brass rod for machining and forging applications. They currently operate two chip dryers and three induction melters which supply molten brass to three horizontal casters. The facility receives brass chips and scrap that are used in the production process. Prior to being loaded into the melting furnaces, the oil and moisture content of the chips is removed in the chip dryers. After drying, the brass chips are transferred to the induction melters where the chips are melted along with other brass scrap. Molten brass is then transferred into either a pressurized holding furnace or holding chamber and then cast as brass logs in the horizontal casters. The brass logs are cut into billets which are then extruded and cold drawn into brass rod. The brass rod are sent through a pickling process to remove metal oxides and is then shipped to customers or stored at the facility.

Emissions from the brass chip dryers are controlled by a cyclone, then a thermal oxidizer and finally the exhaust gases pass through a precoolers/wet scrubber system with a demister before being discharged to the ambient air.

Emissions from the three melting furnaces, pressurized holder and three horizontal casters are controlled by two baghouses.

As required by the revised NAAQS for lead, published in the Federal Register on November 12, 2008, sources emitting lead greater than 1.0 ton per year are required to have an air quality monitor placed near the facility. Extruded Metals, Inc. exceeded the monitoring requirement threshold. Therefore, an ambient air monitor was placed adjacent to the facility by the AQD and became operational on January 1, 2010. Air samples collected by the monitor have recorded an exceedance of the revised NAAQS for lead of 0.15 micrograms per cubic meter over a three-month average.

### **Significant Dates**

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|-----------------------|--|
| November 19, 2008     | The AQD requested that Extruded Metals, Inc. conduct emission compliance testing on the West Chip Dryer and Induction Melter No. 8. The request was made because the AQD received citizen complaints and observed opacity and odors and because of the period of time since the last compliance test (1992).   |
| February 18, 2009     | A meeting between the AQD and Extruded Metals, Inc. was held at the request of the company to discuss stack testing. The facility had dramatically decreased operations and requested an extension to perform stack testing. Since the decrease in operations appeared to impact the ability to perform testing that would be representative of normal operations, an extension was granted. The testing deadline was extended to September 20, 2009. The facility also indicated that they had switched operations from Induction Melter No. 8 to Induction Melter No. 7. |
| September 28-30, 2009 | Extruded Metals, Inc. conducted compliance testing on the West Chip Dryer and Induction Melter No. 7.  |
| November 25, 2009     | The AQD received the results of the compliance testing showing that the West Chip Dryer was violating the permitted emission limits for lead, particulate matter, and hydrogen chloride.   |
| December 11, 2009     | A quality assurance audit of compliance test report was completed by the AQD confirming non-compliance with the West Chip Dryer emission limits.   |
| December 28, 2009     | A Violation Notice (VN) was issued to Extruded Metals, Inc. for emission limit exceedances.  |
| January 14, 2010      | The AQD received Extruded Metals, Inc.'s response to the VN issued on December 28, 2009. The response outlined actions taken by the facility to bring the West Chip Dryer into compliance with emission limits. The facility proposed retesting on April 15, 2010, which was subsequently delayed twice until July 14, 2010, to allow for new burners and control equipment modifications.   |

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| June 1, 2010       | Extruded Metals, Inc. conducted preliminary testing (testing not conducted according to AQD protocol) that showed they were complying with the lead emission limits but were still exceeding the particulate matter and hydrogen chloride emission limits.  |
| June 23, 2010      | A meeting between Extruded Metals, Inc. and the AQD was held at which time they proposed to install an enhanced scrubber system on the West Chip Dryer to bring the unit into compliance with permit emission limits. The project would take approximately 12 weeks to complete. Extruded Metals, Inc. proposed to retest the unit upon completion of the enhanced scrubber project. The AQD informed Extruded Metals, Inc. that compliance testing would also need to be performed on the East Chip Dryer. Extruded Metals, Inc. agreed to perform minor upgrades to the control system on the East Chip Dryer within two weeks and install an enhanced scrubber system upon completing installation and verifying efficiency of the control on the West Chip Dryer. |
| July 19, 2010      | The AQD sent a letter to Extruded Metals, Inc. requesting compliance testing be conducted on the East Chip Dryer within 60 days to determine if the East Chip Dryer was also exceeding permitted emission limits.   |
| July 23, 2010      | District refers the case for escalated enforcement action.  |
| August 9, 2010     | Extruded Metals, Inc. discontinued operations of the East Chip Dryer instead of conducting the testing requested on July 19, 2010, and agreed not to restart the dryer unless an upgraded control system was installed and emissions testing is conducted to verify compliance with applicable emission limits.   |
| September 9, 2010  | An initial enforcement meeting was held between Extruded Metals, Inc. and the AQD.  |
| September 20, 2010 | Extruded Metals, Inc. completed installation of an enhanced scrubber system on the West Chip Dryer to reduce air emissions.   |
| September 23, 2010 | The MDEQ held a public meeting in Belding to inform residents about the lead emission exceedances and actions being taken to reduce lead in the air in Belding.   |
| October 1, 2010    | Extruded Metals, Inc. conducted emissions testing on the West Chip Dryer. Results of the testing showed compliance with the permitted emission limits for lead, particulate matter and hydrogen chloride.   |
| November 4-5, 2010 | Extruded Metals, Inc. conducted emissions testing on the East and West Baghouses which control emissions from the three brass melting furnaces at the facility. Results of the testing showed compliance with the permitted emission limits.  |

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| January 12, 2011 | A public meeting was held by the MDEQ to update residents on lead in the air and soils and actions being taken to address exceedances.   |
| January 21, 2011 | Extruded Metals, Inc. submits PTI application No. 16-11 to the AQD to resolve the alleged violations.  |
| January 28, 2011 | The United States Environmental Protection Agency (EPA) sends a Finding of Violation letter to Extruded Metals, Inc. for alleged violations of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing Area Sources at 40 C.F.R. Part 63, Subpart TTTTTT. |
| June 2, 2011     | Extruded Metals, Inc. agrees to enter into a proposed Consent Order to resolve the violations alleged by the MDEQ.   |

### **Compliance Issues**

Extruded Metals, Inc.'s facility exceeded the West Chip Dryer emission limits for lead, hydrogen chloride, and particulate matter contained in PTI No. 505-93 as documented in stack testing performed on September 28-30, 2009.

In addition to the exceedances of the permitted emission limits for the West Chip Dryer, an air quality monitor was installed by the AQD adjacent to the facility as required by the revised NAAQS for lead issued in November 2008. The air monitor recorded three-month average exceedances of the NAAQS for lead from April 2010 through October 2010.

### **Proposed Facility and Present Air Quality**

The PTI application, No. 16-11, is for the addition of controls (modified scrubbers, mister nozzles and demisters) and taller stacks for the two chip dryers. These modifications are necessary to demonstrate compliance with the NAAQS for lead which was recently revised to a lower concentration. Currently, the facility is located in an area designated attainment for all criteria pollutants, but this area will be redesignated as nonattainment for lead based on recent MDEQ monitoring results that show that the amount of lead in the air exceeds the revised NAAQS.

### **Pollutant Emissions**

This facility is located in an attainment area for all criteria pollutants but will be designated nonattainment for lead in the near future. Currently, the potential to emit for all criteria pollutants emitted from the facility is less than 100 tons per year (tpy), therefore, this facility is not subject to the Prevention of Significant Deterioration (PSD) or to the Renewable Operating Permit (ROP) requirements.

The following table provides the potential to emit for each criteria pollutant:

**EMISSION SUMMARY**

| <b>Pollutant</b>                   | <b>Estimated Emissions (tpy)</b> |
|------------------------------------|----------------------------------|
| Particulate Matter (PM)            | 31.9                             |
| PM10*                              | 98.2                             |
| PM2.5**                            | 98.2                             |
| Sulfur Dioxide (SO <sub>2</sub> )  | 0.18                             |
| Carbon Monoxide (CO)               | 25.1                             |
| Nitrogen Oxides (NO <sub>x</sub> ) | 34.3                             |
| Lead                               | 2.4                              |
| Sulfuric Acid Mist                 | 1.8                              |

\* Particulate matter less than 10 microns in diameter

\*\* Particulate matter less than 2.5 microns in diameter

**Key Permit Review Issues**

Staff evaluated the proposed project to identify all state rules and federal regulations which are, or may be, applicable. The tables in Appendix 1 summarize these rules and regulations.

- **Prevention of Significant Deterioration (PSD) Regulations** – The facility is one of the 28 source categories listed in the PSD regulations, therefore the PSD major source threshold is 100 tpy. The facility is not subject to PSD review for any criteria pollutant because the potential to emit of the facility is currently less than the PSD major source threshold. Once a source is major for a single criteria pollutant, it is major for other criteria pollutants at their significance level.
- **Federal NESHAP Regulations** - National Emission Standards for Hazardous Air Pollutants (NESHAP) were established under 40 CFR Part 61 or Part 63. The facility may be subject to the NESHAP for Secondary Nonferrous Metals Processing Area Sources, 40 CFR Part 63 Subpart TTTTTT.
- **Rule 224 T-BACT Analysis** – The two chip dryers are subject to the requirements of Rule 224, Best Available Control Technology for Toxic Air Contaminants (T-BACT). The two chip dryers are controlled by a cyclone, then a thermal oxidizer and finally the exhaust gases pass through a precooler/wet scrubber system with a demister. The controls meet the requirements of Rule 224.
- **Rule 225 Toxics Analysis** – The MDEQ Rules for Air Pollution Control require the ambient air concentration of toxic air contaminants (TACs) be compared against health-based screening levels. AQD staff evaluated TAC impacts from the facility even though the facility is not changing any process equipment or requesting to increase emissions. The review found that all TACs show impacts less than the established health-based screening levels and will comply with the requirements of Rule 225.

#### Toxic Air Contaminant Impacts

| CAS No.   | Toxic Air Contaminant | Averaging Time | Screening Level Type | Screening Level ( $\mu\text{g}/\text{m}^3$ ) | Pollutant Impact ( $\mu\text{g}/\text{m}^3$ ) | % of Screening Level |
|-----------|-----------------------|----------------|----------------------|--|---|----------------------|
| 7664-93-9 | Sulfuric Acid         | 8-hr           | ITSL                 | 10   | 7.3   | 73%                  |
| 7647-01-0 | Hydrogen Chloride     | 1-hr           | ITSL                 | 2100   | 3.5   | 0.2%                 |
| 7647-01-0 | Hydrogen Chloride     | Annual         | ITSL                 | 20   | 0.22  | 1%                   |
| 7440-50-8 | Copper                | 8-hr           | ITSL                 | 2  | 0.5   | 25%                  |
| 1314-13-2 | Zinc                  | 8-hr           | ITSL                 | 50   | 1.6   | 3%                   |

- **Criteria Pollutants Modeling Analysis** - Computer dispersion modeling was performed to predict the air impacts of lead emissions. Lead emissions from the proposed facility were evaluated against the NAAQS. The NAAQS is intended to protect public health. The modeling showed the maximum 3-month rolling average impact, including the background concentration, to be 0.123 microgram per cubic meter which is below the NAAQS of 0.15 microgram per cubic meter for lead. The facility will be required to raise the stacks for the two chip dryers to 122 feet to meet this standard.
- **Additional Impact Analysis** – An additional impact analysis was performed by the applicant to evaluate the impacts from the proposed project for soils (deposition modeling).

The proposed lead emissions have been modeled to meet the NAAQS for lead. As stated above, that standard is protective of the public health, particularly the critical effect of children's lead exposure and potential effects on intelligence and behavior. The air quality standard was set at a level that accounted for inhalation exposure as well as deposition to the ground, with subsequent children's exposure via topsoil and house dust. However, elevated lead levels in the topsoil in the Belding area are currently under investigation by the MDEQ and Extruded Metals, so there may be a concern that future lead emissions could add to the topsoil lead level. Therefore, the applicant provided a modeling study to characterize the potential future lead deposition impact in the Belding area. Consistent with MDEQ and EPA guidance, the applicant estimated that the point of highest lead deposition impact may have an additional 9.76 parts per million (ppm) of lead in the topsoil after 30 years of accumulated impact from facility emissions at the maximum permitted emission rate. For perspective, the MDEQ residential topsoil cleanup standard for areas where children may play is set at 400 ppm, to provide protection to children from harmful levels of exposure.

#### Key Aspects of Draft Permit Conditions

- **Emission Limits** – The draft permit includes PM, lead, sulfuric acid and hydrogen chloride emission limits for the two chip dryers and PM, lead, copper and zinc emission limits for the three melt furnaces. Additionally, the draft permit requires each of the two chip dryers to be operated with a cyclone, thermal oxidizer and a precooler/wet scrubber system with a demister to limit the PM, lead, sulfuric acid and hydrogen chloride emissions. The three melt furnaces are required to be operated with baghouses to control PM, lead, copper and zinc emissions.
- **Process/Operational Restrictions** - Within 60 days after issuance of the permit, the permittee must submit a malfunction abatement/operation and preventative maintenance

plan for the chip dryers and the melt furnaces. Once the plan is approved, the facility shall not operate the equipment unless the plan is implemented and maintained.

- **Federal Regulations** – The facility may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR Part 63 Subpart TTTTTT. The permit specifies that permittee must be in compliance with this NESHAP, as applicable.
- **Testing & Monitoring Requirements** – The draft permit includes the following requirements for the equipment at the facility:

Two chip dryers:

- Verify lead, PM, sulfuric acid, and hydrogen chloride emission rates through performance testing once every five years for the west chip dryer.
- Verify lead, PM, sulfuric acid, and hydrogen chloride emission rates through performance testing within 90 days after restart of the east chip dryer and once every five years thereafter.
- Monitor and record the temperature of the thermal oxidizer on a continuous basis when the associated chip dryer is operating.
- Once each shift, the permittee shall record the nozzle water pressure for the precooler/scrubber system when the associated chip dryer is operating.

Three melt furnaces:

- Monitor and record the pressure drop across each baghouse on a continuous basis when the associated induction melting furnaces are operating.

### **Compliance Program**

Under the agreed upon terms of the proposed consent order, Extruded Metals, Inc. will comply with proposed PTI application No. 16-11 and made enforceable under the proposed consent order. The proposed consent order incorporates a settlement amount of \$176,000.00 and stipulated penalties of \$500.00 to \$5,000.00 per violation per day for any future noncompliance of the proposed consent order.

### **Conclusion and Recommendation**

AQD staff believe that the proposed consent order, as drafted, contains an appropriate compliance program for resolution of the alleged federal and state air quality violation. AQD staff recommend that the proposed consent order be entered into unless substantive adverse public comments are received during the public comment period.

Additionally, based on the analyses conducted to date, AQD staff concludes that the proposed project would comply with all applicable state and federal air quality requirements. AQD staff also concludes that this project, as proposed, would not violate the federal National Ambient Air Quality Standards or the state and federal PSD increments.

Based on these conclusions, AQD staff has developed draft permit terms and conditions which would ensure that the proposed facility design and operation are enforceable and that sufficient



monitoring, recordkeeping, and reporting would be performed by the applicant to determine compliance with these terms and conditions. If the permit application is deemed approvable, the delegated decision maker may determine a need for additional or revised conditions to address issues raised during the public participation process.

If you would like additional information about the proposed permit, please contact Mr. Jeff Rathbun, AQD, at 517-241-8072. If you would like additional information about the proposed consent order, please contact Mr. Mike Kovalchick, AQD, at 517-335-6343

**Appendix 1**  
**STATE AIR REGULATIONS**

| <b>State Rule</b>                | <b>Description of State Air Regulations</b>  |
|----------------------------------|--|
| <b>R 336.1201</b>                | Requires an Air Use Permit for new or modified equipment that emits, or could emit, an air pollutant or contaminant. However, there are other rules that allow smaller emission sources to be installed without a permit (see Rules 336.1279 through 336.1290 below). Rule 336.1201 also states that the Department can add conditions to a permit to assure the air laws are met.   |
| <b>R 336.1205</b>                | Outlines the permit conditions that are required by the federal Prevention of Significant Deterioration (PSD) Regulations and/or Section 112 of the Clean Air Act. Also, the same types of conditions are added to their permit when a plant is limiting their air emissions to legally avoid these federal requirements. (See the Federal Regulations table for more details on PSD.)   |
| <b>R 336.1224</b>                | New or modified equipment that emits toxic air contaminants must use the Best Available Control Technology for Toxics (T-BACT). The T-BACT review determines what control technology must be applied to the equipment. A T-BACT review considers energy needs, environmental and economic impacts, and other costs. T-BACT may include a change in the raw materials used, the design of the process, or add-on air pollution control equipment. This rule also includes a list of instances where other regulations apply and T-BACT is not required. |
| <b>R 336.1225 to R 336.1232</b>  | The ambient air concentration of each toxic air contaminant emitted from the project must not exceed health-based screening levels. Initial Risk Screening Levels (IRSL) apply to cancer-causing effects of air contaminants and Initial Threshold Screening Levels (ITSL) apply to non-cancer effects of air contaminants. These screening levels, designed to protect public health and the environment, are developed by Air Quality Division toxicologists following methods in the rules and U.S. EPA risk assessment guidance.                   |
| <b>R 336.1279 to R 336.1290</b>  | These rules list equipment to processes that have very low emissions and do not need to get an Air Use permit. However, these sources must meet all requirements identified in the specific rule and other rules that apply.   |
| <b>R 336.1299(2)(b)</b>          | Adopts by reference the provisions of 40 CFR 63.40 to 63.44 (2002) and 40 CFR 63.50 to 63.56 (2002), the federal hazardous air pollutant regulations governing constructed or reconstructed major sources.   |
| <b>R 336.1301</b>                | Limits how air emissions are allowed to look at the end of a stack. The color and intensity of the color of the emissions is called opacity.   |
| <b>R 336.1331</b>                | The particulate emission limits for certain sources are listed. These limits apply to both new and existing equipment.   |
| <b>R 336.1370</b>                | Material collected by air pollution control equipment, such as dust, must be disposed of in a manner, which does not cause more air emissions.   |
| <b>R 336.1401 and R 336.1402</b> | Limit the sulfur dioxide emissions from power plants and other fuel burning equipment.   |
| <b>R 336.1601 to R 336.1651</b>  | Volatile organic compounds (VOCs) are a group of chemicals found in such things as paint solvents, degreasing materials, and gasoline. VOCs contribute to the formation of smog. The rules set VOC limits or work practice standards for existing equipment. The limits are based upon Reasonably Available Control Technology (RACT). RACT is required for all equipment listed in Rules 336.1601 through 336.1651.   |
| <b>R 336.1702</b>                | New equipment that emits VOCs is required to install the Best Available Control Technology (BACT). The technology is reviewed on a case-by-case basis. The VOC limits and/or work practice standards set for a particular piece of new equipment cannot be less restrictive than the Reasonably Available Control Technology limits for existing equipment outlined in Rules 336.1601 through 336.1651.  |
| <b>R 336.1801</b>                | Nitrogen oxide emission limits for larger boilers and stationary internal combustion engines are listed.   |

### STATE AIR REGULATIONS

| State Rule  | Description of State Air Regulations   |
|---|--|
| <b>R 336.1901</b>   | Prohibits the emission of an air contaminant in quantities that cause injurious effects to human health and welfare, or prevent the comfortable enjoyment of life and property. As an example, a violation may be cited if excessive amounts of odor emissions were found to be preventing residents from enjoying outdoor activities.   |
| <b>R 336.1910</b>   | Air pollution control equipment must be installed, maintained, and operated properly.  |
| <b>R 336.1911</b>   | When requested by the Department, a facility must develop and submit a malfunction abatement plan (MAP). This plan is to prevent, detect, and correct malfunctions and equipment failures.   |
| <b>R 336.1912</b>   | A facility is required to notify the Department if a condition arises which causes emissions that exceed the allowable emission rate in a rule and/or permit.  |
| <b>R 336.2001 to R 336.2060</b>   | Allow the Department to request that a facility test its emissions and to approve the protocol used for these tests.   |
| <b>R 336.2801 to R 336.2804 Prevention of Significant Deterioration (PSD) Regulations</b> | The PSD rules allow the installation and operation of large, new sources and the modification of existing large sources in areas that are meeting the National Ambient Air Quality Standards (NAAQS). The regulations define what is considered a large or significant source, or modification.<br><br>In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing the BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.   |
| <b>Best Available Control Technology (BACT)</b>   | In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.  |
| <b>R 336.2901 to R 336.2903 and R 336.2908</b>  | Applies to new "major stationary sources" and "major modifications" as defined in R 336.2901. These rules contain the permitting requirements for sources located in nonattainment areas that have the potential to emit large amounts of air pollutants. To help the area meet the NAAQS, the applicant must install equipment that achieves the Lowest Achievable Emission Rate (LAER). LAER is the lowest emission rate required by a federal rule, state rule, or by a previously issued construction permit. The applicant must also provide emission offsets, which means the applicant must remove more pollutants from the air than the proposed equipment will emit. This can be done by reducing emissions at other existing facilities.<br><br>As part of its evaluation, the AQD verifies that no other similar equipment throughout the nation is required to meet a lower emission rate and verifies that proposed emission offsets are permanent and enforceable. |

### FEDERAL AIR REGULATIONS

| Citation   | Description of Federal Air Regulations or Requirements  |
|--|---|
| <b>Section 109 of the Clean Air Act – National Ambient Air Quality Standards (NAAQS)</b> | The United States Environmental Protection Agency has set maximum permissible levels for seven pollutants. These NAAQS are designed to protect the public health of everyone, including the most susceptible individuals, children, the elderly, and those with chronic respiratory ailments. The seven pollutants, called the criteria pollutants, are carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter less than 10 microns (PM10), particulate matter less than 2.5 microns (PM2.5), and sulfur dioxide. Portions of Michigan are currently non-attainment for either ozone or PM2.5. Further, in Michigan, State Rules 336.1225 to 336.1232 are used to ensure the public health is protected from other compounds. |

### FEDERAL AIR REGULATIONS

| Citation   | Description of Federal Air Regulations or Requirements  |
|--|---|
| <b>40 CFR 51<br/>Appendix S<br/>Emission Offset<br/>Interpretive Ruling</b>  | Appendix S applies during the interim period between nonattainment designation and EPA approval of a SIP that satisfies nonattainment requirements specified in Part D of the Clean Air Act. Appendix S would apply in nonattainment areas where either no nonattainment permit rules apply or where the existing state rules are less stringent than Appendix S.   |
| <b>40 CFR 52.21 –<br/>Prevention of<br/>Significant<br/>Deterioration<br/>(PSD) Regulations</b><br><br><b>Best Available<br/>Control<br/>Technology<br/>(BACT)</b> | <p>The PSD regulations allow the installation and operation of large, new sources and the modification of existing large sources in areas that are meeting the NAAQS. The regulations define what is considered a large or significant source, or modification.</p> <p>In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.</p> <p>In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.</p> |
| <b>40 CFR 60 –<br/>New Source<br/>Performance<br/>Standards (NSPS)</b>   | The United States Environmental Protection Agency has set national standards for specific sources of pollutants. These New Source Performance Standards (NSPS) apply to new or modified equipment in a particular industrial category. These NSPS set emission limits or work practice standards for over 60 categories of sources.   |
| <b>40 CFR 63—<br/>National<br/>Emissions<br/>Standards for<br/>Hazardous Air<br/>Pollutants<br/>(NESHAP)</b>   | The United States Environmental Protection Agency has set national standards for specific sources of pollutants. The National Emissions Standards for Hazardous Air Pollutants (NESHAP) (a.k.a. Maximum Achievable Control Technology (MACT) standards) apply to new or modified equipment in a particular industrial category. These NESHAPs set emission limits or work practice standards for over 100 categories of sources.  |
| <b>Section 112 of the<br/>Clean Air Act</b><br><br><b>Maximum<br/>Achievable Control<br/>Technology<br/>(MACT)</b><br><br><b>Section 112g</b>                      | <p>In the Clean Air Act, Congress listed 189 compounds as Hazardous Air Pollutants (HAPS). For facilities which emit, or could emit, HAPS above a certain level, one of the following two requirements must be met:</p> <ol style="list-style-type: none"> <li>1) The United States Environmental Protection Agency has established standards for specific types of sources. These Maximum Achievable Control Technology (MACT) standards are based upon the best-demonstrated control technology or practices found in similar sources.</li> <li>2) For sources where a MACT standard has not been established, the level of control technology required is determined on a case-by-case basis.</li> </ol>   |

**Notes:** An "Air Use Permit," sometimes called a "Permit to Install," provides permission to emit air contaminants up to certain specified levels. These levels are set by state and federal law, and are set to protect health and welfare. By staying within the levels set by the permit, a facility is operating lawfully, and public health and air quality are protected.

**The Air Quality Division does not have the authority to regulate noise, local zoning, property values, off-site truck traffic, or lighting.**

These tables list the most frequently applied state and federal regulations. Not all regulations listed may be applicable in each case. Please refer to the draft permit conditions provided to determine which regulations apply.