

## Michigan Guide to Air Use Permits to Install

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Appendix A. Air Use Permit Application Instructions

Appendix B. Application Assembly Flow Chart

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A basic question asked by business in the state of Michigan is: does our facility need any air use permits and what is involved in obtaining these permits? The purpose of the *Michigan Guide to Air Use Permits to Install* is to provide information for business and industry to answer this and other questions about air permits. This is a guide to the current processes, principles, and legislation underlying the Michigan air use permit program.

**The *Michigan Guide to Air Use Permits to Install* is current as of the publication date of August 1994 with some modifications made in April and December 1995. Air quality rules and regulations are currently undergoing change as Michigan adapts its air program to the federal Clean Air Act Amendments of 1990. The state permit to install program has begun to blend with the federally mandated renewable operating permit program. The user of this guide is urged to closely follow the development of new rules.**

This guide focuses mainly on the Michigan permit to install for new or modified sources of air contaminants. *Part 55, P.A. 451 of 1994* and the *Administrative Rules for Air Pollution Control* are referred to throughout this document. It is strongly advised that anyone using this guide refer to the *Act* and its rules for precise requirements. The Michigan Department of Environmental Quality (MDEQ) or the Wayne County air quality staff should also be consulted regarding permit issues.

### **Additional Copies of the Guide**

Additional copies of the *Michigan Guide to Air Use Permits to Install* can be obtained from the Small Business Clean Air Act Assistance Program, the Michigan Department of Environmental Quality Air Quality Division, and the Grand Valley State University Water Resources Institute.

### **Special Note to Wayne County Facilities**

Facilities located in Wayne County are subject to Wayne County air quality regulations as well as state regulations. The Wayne County Agency that used to handle permits is the Wayne County Department of Public Health. In a reorganization effort, however, the permitting agency is now the Wayne County Department of Environment. The Wayne County Air Quality Management Division should be contacted at (313) 832-5000 for the most current status of the Wayne County program.

### **Special Note on MDNR-MDEQ**

Effective in October 1995, the MDNR was split into two departments. The new Michigan Department of Environmental Quality (MDEQ) has assumed the responsibility for the air quality programs. References to MDNR in this guide have been changed to MDEQ.

# Michigan Guide to Air Use Permits to Install

## **1. How do I determine if an air permit is needed?**

- Permit to install (Rule 201)
- Federal renewable operating permit program

### **Permit to install**

Does your business have paint and other coating application booths, storage tanks, printing lines, boilers, soil remediation projects, dust collectors, plating operations, degreasers, batch processes, or any process or process control equipment that may emit air pollution? If so, your facility may need a Michigan "permit to install" or perhaps a renewable operating permit for air emissions.

The simplest answer to the question "How do I determine if an air permit is needed?" is found in the Michigan's *Administrative Rules for Air Pollution Control*:

*A person shall not install, construct, reconstruct, relocate, alter, or modify any process or process equipment, including control equipment pertaining thereto, which may emit an air contaminant, unless a permit to install which authorizes such action is issued by the Department.*

*[Mich. Admin. Code R. 336 1201]*

In the context of this rule (Rule 201), "process equipment" refers to all equipment, devices, and auxiliary components, including control equipment (air cleaning devices), used in a process that emits an air contaminant. A process is an action or operation, or series of actions or operations, from which an emission of an air contaminant may originate. Examples of processes include a physical change of a material; a chemical change of a material; combustion of fuel, refuse, or waste material; and storage of a material or handling of a material. The "Department" is the Michigan Department of Environmental Quality (MDEQ).

"Air contaminant" means a dust, fume, gas, mist, odor, smoke, vapor or any combination thereof. Air contaminants of concern include air toxics as well as the criteria pollutants which are:

- Sulfur dioxide (SO<sub>2</sub>)
- Airborne particulates smaller than ten microns in size (PM-10)

- Carbon monoxide (CO)
- Oxides of nitrogen (NO<sub>x</sub>)
- Ozone (O<sub>3</sub>)
- Lead

Emissions of toxic air contaminants in Michigan are controlled under two sets of regulations: (1) state administrative rules and (2) the federal Clean Air Act, as amended. The Michigan air toxics rules, which became effective on April 17, 1992, are more stringent than some current federal regulations. According to Michigan's rules, all known substances can be regulated as toxic contaminants (except for 40 substances that have been specifically excluded because they are regulated elsewhere in the law or are considered relatively non-toxic). Specifically, a "toxic air contaminant" or "TAC" is any contaminant for which there is no national ambient air quality standard and which is, or may become, harmful to public health or the environment when present in the outdoor atmosphere in sufficient quantities and duration. Rule 120 (e) (R 336.1120) of the *Administrative Rules for Air Pollution Control* lists the exemptions to this definition, but otherwise, just about any air contaminant can be considered toxic.

Note that Rule 201 does not state that an air contaminant has to be released, but that it *may* be possible to release an air contaminant.

**However, not everything that emits or may emit an air contaminant needs a permit.** The *Administrative Rules for Air Pollution Control* list a number of exemptions that should be consulted prior to the determination of the need for a permit as mentioned in the next section of this guide.

**A "permit to install" must be obtained before installation, reconstruction, relocation, and alteration or modification of a process or process equipment.** The permit is issued by the Michigan Department of Environmental Quality, Air Quality Division or Wayne County after receipt of an application package, administrative and technical review, development of a draft permit, and final approval. It may be possible to apply for a waiver to begin construction prior to receiving a permit to install but the applicant undertakes construction at his/her own risk. An application for a permit to install must be submitted in order to apply for a waiver. It is possible that MDEQ may require another kind of control equipment other than what is proposed by the applicant. More details on waivers can be found in Section 10 of this guide.

Also, **existing sources of air contaminants installed before August 15, 1967 are not required to apply for a permit unless equipment or production processes are or have been modified.** There are very few current "grandfathered" sources since most facilities have had changes or modifications throughout the years that could require a permit. These sources may still have to file Air Pollution Reporting Forms with the Air Quality Division of the Michigan Department of Environmental Quality. The

reporting package contains a series of forms that must be filled out and returned to the Air Quality Division by March 15 of each year. Much of the required information will be pre-printed from the information that the MDEQ has on file. New and existing manufacturing, commercial, and institutional establishments may be required to file these Air Pollution Reporting Forms for each location in Michigan if requested by the MDEQ.

In summary, just about any industrial or manufacturing process and/or process equipment requires a permit to install unless it can be specifically exempted or demonstrated that it does not have the potential to emit an air contaminant.

## **Federal renewable operating permit program**

The scope of this guide is the Michigan permit to install. However, facilities that need permits to install and those that have existing permits to install should be aware of the federal, now the state, renewable operating permit (ROP) program that was put in place in Michigan in 1995. Business and industry in Michigan face a dual challenge of compliance with existing Michigan air quality regulations and the regulations enacted under the Title V of the Clean Air Act Amendments of 1990 (CAAA). Essentially, the ROP consolidates permits to install in to a facility-based permit which must be renewed every five years.

Facilities with existing permits will need to inventory their emissions to determine if the renewable operating permit regulations will apply. The emissions inventory should include actual emissions as well as potential emissions. Major sources of air contaminants will generally need a renewable operating permit. Facilities are major sources if the criteria pollutant actual or potential emissions are more than 100 tons per year and/or hazardous air pollutant emissions are 10 tons or more per year of a single hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants. These sources are likely to be subject to air quality fees.

The Michigan Small Business Clean Air Assistance Program has prepared fact sheets and publications such as the *Guidebook for Determining Applicability* for the renewable operating permit program. More detailed information about this program and other resources can be found in the Tab 17 of this guide, *Renewable Operating Permits*.

## **2. Are there exemptions from permits to install?**

- Exemptions for grandfathered sources
- Exemptions from permits to install (Rules 278 - 290)

### **Exemptions for grandfathered sources**

There are a number of exemptions from Michigan air use permits besides grandfathered sources installed prior to August 15, 1967. The exemptions are based on the assumption that certain emission sources will have little or no potential to adversely impact air resources. If a source is exempt, there is no need to notify the Air Quality Division about the source and no permit conditions will apply. Consequently, the MDEQ does not maintain any formal listing of installed exempt sources, although the MDEQ District Office files may have exempt sources listed on inspection activity reports. **Note, however, that a source is still subject to other rules, such as those regarding air emission nuisances, even if it is exempt.**

### **Exemptions from permits to install (Rules 278 - 290)**

The District air quality staff can be consulted to determine if your air contaminant source is exempt and you should refer to the exemptions sections (Rules 278-290) of the *Administrative Rules for Air Pollution Control* which can be obtained from the MDEQ Air Quality Division in Lansing.

Rule 278 serves as an initial screening for construction projects involving the "installation/construction" and/or "modification" of emission units. If the proposed project does not satisfy any of the criteria contained within the rule, then the facility can evaluate permit exemptions found in Rules 279 and 290, as well as in Operational Memoranda issued periodically by the MDEQ. Instructions for use of this rule are found in the publication entitled, "Permit to Install - Determining Applicability Guidebook." This publication is found under Tab 17 - CAAP Publications.

**The recently promulgated rule (Rule 278), does *not* allow exemptions from a permit to install for major sources, major offset sources, major modifications, or significant emissions of criteria pollutants.** In other words, you will not only need to characterize your emission source as to the type of air contaminant, but you should also determine the amount of the emissions. According to Michigan rules, the definition of a "major offset source" means either a stationary source which has the potential to emit 100 or more tons per year of air contaminants regulated under the Clean Air Act or a particular change that increases the potential to emit by a significant amount. Significant increases in emissions applicable to modifications are:

- Carbon monoxide - 100 tons per year
- Nitrogen oxides - 40 tons per year
- Sulfur dioxide - 40 tons per year
- Particulate matter (TSP) - 25 tons per year
- Particulate matter less than 10 microns (PM-10) - 15 tons per year
- Volatile organic compounds - 40 tons per year
- Lead - 0.6 tons per year

In portions of the state where air quality standards are not being met, facilities may have to find emission offsets which are reductions of emissions from other existing stationary sources of air contaminants. Major sources are addressed in the rules relating to the permit to install and renewable operating permit programs.

Exemptions for permits to install are allowed under Rules 279 through 290 [Mich. Admin. Code R. 336.1279 - 336.1290] where categories of permit exemptions are listed. Operational memoranda and interoffice communications such as those found in Tab 16, *MDEQ Guidance*, should be consulted as well as periodic checks of the MDEQ Internet site for rules packages that deal with exemptions.

An example of how to use the rules for determining specific exemptions is:

1. Define the amount of each air contaminant to determine if the source is not a major source or modification, or if emissions are not significant.
2. Characterize the source as to the process or process equipment.
3. Read the rules carefully for an exemption that could apply to a source.

If a source appears to be in one of the exempt categories, the actual rules should be consulted to identify whether there is, in fact, a potential exemption. **DO NOT rely on the rule heading to identify an exempt source; instead, read the entire rule before making a decision.** The most current listing of exemptions should be used for any decisions made about whether an air use permit is required.

Examples of the broad categories where certain specific exemptions may be found are:

- Other sources as specified in writing by the department (Rule 279)
- Cooling and ventilating equipment (Rule 280)
- Cleaning, washing, and drying equipment (Rule 281)
- Furnaces, ovens or heaters (Rule 282)

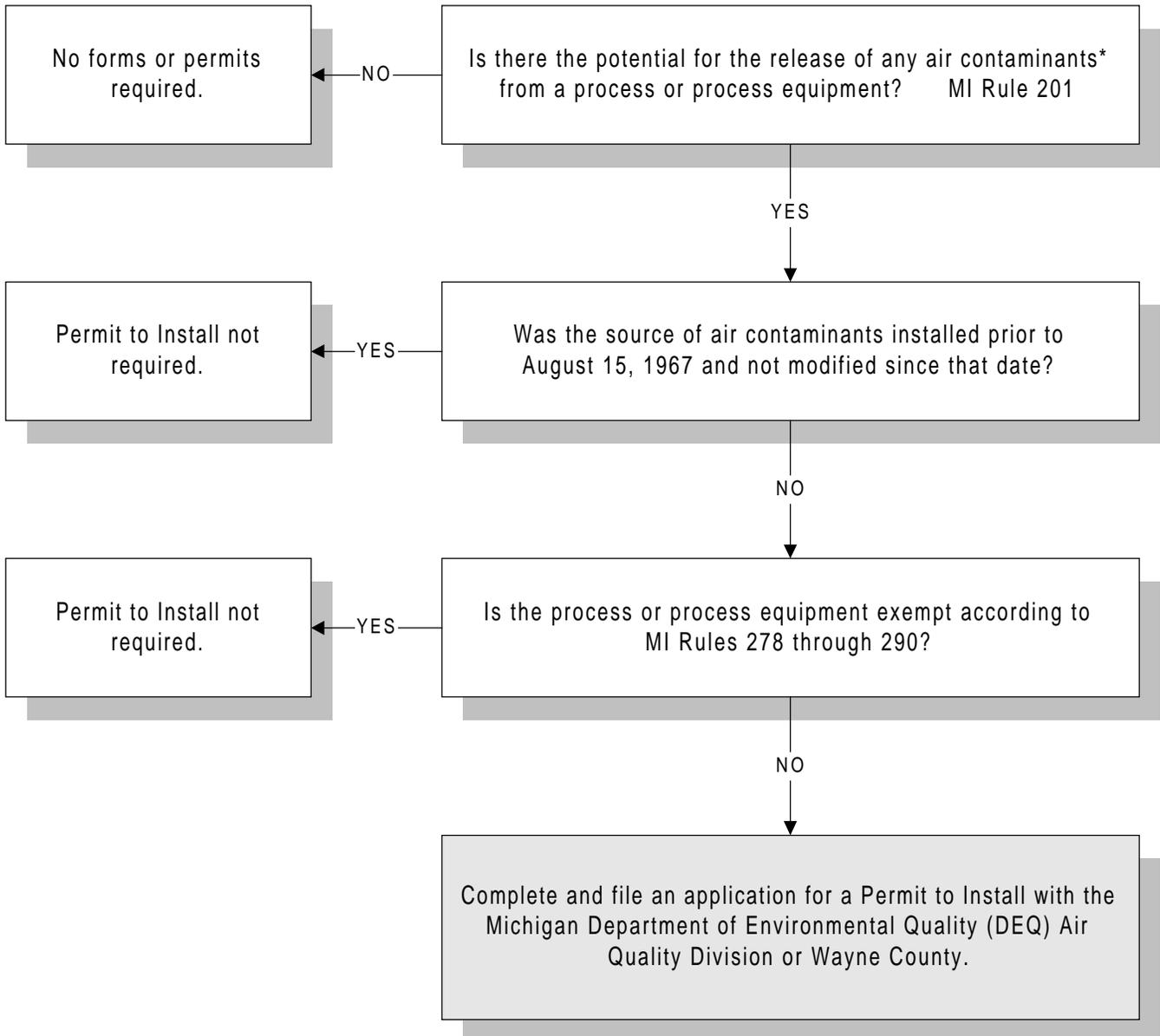
- Testing and inspection equipment (Rule 283)
- Containers, reservoirs or tanks (Rule 284)
- Miscellaneous minor parts replacement or repairs, and other miscellaneous operations (Rule 285)
- Plastic processing equipment (Rule 286)
- Surface coating equipment (Rule 287)
- Oil and gas processing equipment (Rule 288)
- Asphalt and concrete production equipment (Rule 289)
- Sources with limited emissions (Rule 290)

If emissions are noncarcinogenic volatile organic compounds (VOCs), there may be an exemption from the permit system (Rule 290) if all three of the following conditions apply:

1. The uncontrolled emissions of VOCs do not exceed 1,000 pounds per month.
2. A description of the process and equipment is maintained throughout the life of the process or process equipment.
3. Records of emissions are maintained on file for the most recent two years.

The rules must be read carefully to determine if a source really falls under an exemption category. Your MDEQ district office or Wayne County air quality staff can assist in an interpretation of the rules. **It is better to assume you may need a permit until you can prove otherwise.** If you determine that a source is exempt, keep a written record of how you arrived at that decision.

# Does my process or process equipment need a permit to install?



\* "Air contaminant" is defined as a dust, fume, gas, mist, odor, smoke, vapor or any combination thereof.

### 3. What happens if a required permit is not procured?

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- Civil penalties
- Criminal penalties

The primary intent of this guide is to help applicants understand the mechanics of obtaining a permit to install for proposed new sources of air contaminants at new or existing facilities. If you have already installed equipment or a process and you need a permit, this guide can still be used to provide the required information and suggestions to proceed to get a permit.

#### Civil penalties

If you do not obtain a permit required under *Part 55, P.A. 451 of 1994*, the Michigan Attorney General's office may commence a civil action against a person for appropriate relief, including court-ordered relief, and a civil fine. The civil fine can be up to \$10,000 for each instance of violation and, if the violation continues, \$10,000 for each day the violation continues. The full value of injuries to the natural resources of the state and cost of litigation can also be recovered.

#### Criminal penalties

Failure to obtain a permit can also involve criminal penalties. The guilty party can be charged with a misdemeanor and fined up to \$10,000 per day for each violation. An award of up to \$10,000 may be given to an individual who provides information resulting in the assessment of a civil fine by a court or leading to the arrest and conviction of a person who has violated the Act.

The degree of the penalty may be tempered by the:

- Size of the business
- Economic impact of the penalty on the business
- Violator's full compliance history and good faith efforts to comply
- Duration of the violation
- Previous penalties for the same violation
- Economic benefit of noncompliance
- Seriousness of the violation

This implies some discretion on the part of the courts as to how strict or lenient the civil and criminal fines can be.

## 4. What kinds of permits are there?

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- Permit to install (Rule 201)
- Renewable operating permit (Rule 210)

*The following material is based on rules currently being promulgated by the Michigan Department of Environmental Quality. Michigan has been required to significantly alter portions of its air quality regulations to comply with the federal Clean Air Act Amendments of 1990. For the latest developments, consult the MDEQ Air Quality Division, the Michigan Small Business Clean Air Assistance Program, or other organizations.*

An approved permit is required prior to installation, construction, or modification of a source that may emit air contaminants unless an exemption is provided for a specific activity. The air use permit structure in the state of Michigan includes a nonrenewable permit to install and a renewable operating permit as referenced in the federal Clean Air Act Amendments of 1990.

### Permit to install

The basic permit for a process or process equipment is the permit to install. The permit to install is for new processes or process equipment and modifications of existing equipment that result in a change in emissions. The permit to install has general and special conditions that must be met in order for a facility to be in compliance. A permit to install is not renewable. A new permit will be issued if there is a significant change in a process or process equipment.

Each year, more than 2,000 applications for permits to install are received by the MDEQ Air Quality Division. Applicants with sources proposed to be located in Wayne County need to obtain a permit to install from the Air Quality Management Division of the Wayne County Department of Environment. Applicants from the rest of the counties in Michigan will submit applications to the MDEQ Air Quality Division. Review of an application includes a technical review by the Permit Section engineers and a site evaluation by the Compliance Section district staff.

After internal processing is completed, the Air Quality Division or Wayne County develops the permit to install. This permit contains stipulations and conditions necessary to insure that the proposed source will comply with all applicable state, federal, or other regulations in effect at the time the permit is issued, and will operate in an environmentally safe and acceptable manner.

Permits to install can have federally enforceable provisions that restrict the potential to emit so that a source can avoid being classified as major. This could allow a company to opt out of the renewable operating permit

program. These emission limitations must be enforceable in a practical manner and the draft permit must have completed the public participation process.

The permit to install terms and conditions can be incorporated into a renewable operating permit. If your source does not need a renewable operating permit, the permit to install is the primary permit. In the past, the issuance of a permit to install was followed by the application for and issuance of a permit to operate. The need for a permit to operate for sources has been eliminated. Operation of the process or process equipment is allowed as long as the process or process equipment performs in accordance with the terms and conditions of the permit, and notification requirements have been met.

## **Renewable operating permit**

The new renewable operating permit program ("Title V or renewable operating permit program"), which is administered by the state, will require permits that are issued for a term of five years. However, only a subset of Michigan facilities (approximately 3,000) will need this permit. The renewable operating permit is a facility-wide permit rather than a permit for an individual process or piece of equipment. The term "air emission source" means the entire facility or plant. Within the source are multiple processes that may each have a permit to install. These individual permits to install become void when incorporated into a renewable operating permit. The renewable operating permit is primarily an enforcement tool that documents all of a facility's requirements for compliance with federally enforceable air quality regulations. Requirements specific to the state of Michigan will also be found in the permit.

This permit will require a different application form and more detail than for a permit to install. The MDEQ is developing an electronic submittal system for renewable operating permit applications. These applications will be due starting in 1996. The actual date of submittal for a timely application depends upon the Standard Industrial Classification (SIC) code for the source. Submittal of a complete application for a renewable operating permit does not supersede or affect any requirements to obtain a permit to install. Renewable operating permits will likely be issued in the years 1997, 1998, and 1999. Details about the renewable operating permit will be found in the *Administrative Rules* (Rules 210-218). These rules are expected to be effective in early 1995. They are currently in the promulgation process and are subject to change.

## 5. **What factors influence permit requirements?**

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- Emissions Inventories
- Major/minor source issues
- Federal enforceability of permits to install
- Attainment and nonattainment areas
- Hazardous air pollutants
- Toxic air contaminants (Rule 230)

***Factors that influence permit requirements can be very complex. The discussion that follows is a basic introduction to the myriad of requirements that may or may not apply to a given source. This section is not intended to provide definitive answers to permit requirement questions, but to present background information for an understanding of the issues involved in the permit process.***

### **Emissions Inventories**

The basic air use permit a source at a facility may need is a permit to install. As previously explained, some sources may not even need this permit since they may be exempt by virtue of being "grandfathered" sources or falling into certain exemption categories. There are several items to consider when making a determination of the type of permit and review needed:

- Amount and type of each air emission
- Type of business
- Location of the facility

The MDEQ air quality district staff or Wayne County can assist in the determination of whether your proposed source needs a permit to install or a renewable operating permit. The Michigan Small Business Clean Air Assistance Program is also available for help with permit matters. However, the final determination of requirements is up to the applicant.

The decision on the need for a permit will be expedited if your facility has a good air emissions inventory. An emissions inventory starts with identifying the chemicals, elements, or particles that will be released from the given source or process.

Steps in this process are:

- Make an inventory of raw materials to be used in the process.
- Outline the physical, chemical, or biological changes that will occur to those raw materials.
- Determine which of the raw materials will pass through unchanged and have the potential to be emitted to the atmosphere.

- Determine which by-products will be produced as a result of the process that have the potential to be emitted to the atmosphere.
- Combine this information to determine the type of emissions to be released from the source.
- From the list of materials emitted to the atmosphere, determine which will be subject to regulation. Are any criteria pollutants emitted? Hazardous air pollutants? Toxic air contaminants? Others?

Once the expected emissions have been identified, the next step is to quantify them. This means determining how much of each chemical will be released to the atmosphere. Air quality regulations are based on emissions expressed in various units such as pounds per hour, tons per year, pounds per Btu, pounds per gallon, or pounds per pounds of exhaust gas. Emissions are quantified based on one or a combination of the several factors. These include sampling, emission factors, equipment data, information from Material Safety Data Sheets, and the mass balance approach.

## Major/minor source issues

**Facilities that are major sources of criteria pollutants (sources with emissions of more than 100 tons per year) and/or major sources of hazardous air pollutants (10 tons per year of a single hazardous air pollutant or 25 tons per year of any combination of hazardous air pollutants) are subject to the renewable operating permit program.** The emissions are based on the "potential to emit." The federal regulations define "potential to emit" as:

***The maximum capacity of a stationary source to emit a pollutant under its physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours or operation or on the type or amount of fuel combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.***

Major sources of air contaminants need to provide more information in their permit applications than minor sources and there is more review necessary for these permit applications. Additional permit conditions may be necessary. For instance, New Source Performance Standards (NSPS) have been established for over 60 source categories as found in Part 60 of the Title 40 of the *Code of Federal Regulations*.

## Federal enforceability of permits to install

A facility whose "potential to emit" classifies it as a major source may still be able to avoid the federal renewable operating permit program by taking federally enforceable permit limitations and staying in compliance with these conditions. This would make it a "synthetic minor" source.

## Attainment and nonattainment areas

Different regulations may apply if a source is located in a nonattainment versus an attainment area for air quality standards. The 1970 CAA authorized the establishment of nationwide primary and secondary air quality standards - the National Ambient Air Quality Standards (NAAQS). Primary standards are designed to protect human health. Secondary standards protect public welfare.

There are NAAQS for: sulfur dioxide (SO<sub>2</sub>), airborne particulates smaller than ten microns in size (PM-10), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), ozone (O<sub>3</sub>), and lead. These contaminants are also called criteria pollutants.

States are required to identify areas that either meet NAAQS, do not meet NAAQS, or have insufficient data to make a determination. The NAAQS attainment status (attainment or nonattainment) affects the applicable regulations, the way air use permit applications are reviewed, and the emission limits that are set for a source. Key elements of permits for major sources in nonattainment areas include installation of the most stringent control technology (Lowest Achievable Emission Rate or LAER) and the designation of offsets for any residual emissions attributable to a new facility. LAER is defined as the most stringent emission standard in any State Implementation Plan (SIP) or the lowest emissions any source in the same category has achieved in practice.

Many areas of the nation currently satisfy existing air quality standards and are classified as attainment areas. In order to protect these areas, special rules were established to prevent population and industrial growth from causing a significant deterioration of air quality (Prevention of Significant Deterioration or PSD). The PSD regulations as explained in the *Code of Federal Regulations* [40 CFR 52.21] apply to major stationary sources in one of 28 listed categories that emit, or have the potential to emit, 100 tons per year or more of any pollutant subject to regulation under the Clean Air Act; or stationary sources that emit, or have the potential to emit, 250 tons per year or more of any CAA pollutant. A PSD source must show that it has used Best Available Control Technology (BACT) to reduce emissions. A detailed air quality analysis of the ambient impacts is also required.

## Hazardous air pollutants

The Clean Air Act requires the U.S. EPA to set National Emission Standards for Hazardous Air Pollutants (NESHAPs). The Clean Air Act Amendments of 1990 call for the development of NESHAPs to reduce the emissions of 189 hazardous air pollutants (HAPs) from various source categories. These HAPs include many common industrial solvents. A major HAP source would be a facility that emits more than 10 tons of any single listed HAP or 25 tons of all HAPs combined. Specific groups or categories of HAP sources were placed on a prioritized list for emission standard development. The regulations developed for these categories define the Maximum Achievable Control Technology (MACT) standards for a type of source. MACT levels can be different for existing and new sources. Area sources are stationary sources with HAP emissions less than the major source criteria and may require either MACT or Generally Available Control Technology (GACT).

Small businesses that may be affected by the hazardous air pollutant provisions include dry cleaners, gasoline stations, printers, auto body repair shops, metal finishers, solvent degreasing operations, surface coating and painting operations, and certain small manufacturers. Firms that manufacture, store, and transport chemicals may also be affected. These and other kinds of businesses will be controlled either as "major sources" or smaller "area sources."

## Toxic air contaminants

Michigan's toxic air contaminant rules are now in effect, whereas many of the toxic air contaminant provisions of the federal Clean Air Act will take effect over a period of years up to the year 2000 and beyond. Rule 230 of the *Administrative Rules for Air Pollution Control* applies to all new sources of air pollution which, under Michigan regulations, must obtain an air permit, and to existing sources seeking to modify their process or process equipment. Rule 230 (R 336.1230) requires that all toxic air contaminant emissions for new and modified sources (not existing sources) be controlled by the application of best available control technology for toxics, or T-BACT.

Rule 230 also prohibits the emission of a toxic air contaminant at a level that would cause a predicted ambient impact in excess of a contaminant specific health based screening level. There are three types of screening levels: the initial threshold screening level for a non-carcinogen, and the initial and secondary risk screening levels for a carcinogen. Rule 230 provides exceptions to the requirements of T-BACT, and describes the methods that may be used to determine the threshold and risk screening levels. MDEQ Air Quality Division maintains a list of T-BACT determinations, initial threshold screening levels, initial and secondary risk screening levels, and related information.

Michigan's air toxics rules require two-fold protection. First, the rules require new or modified sources of air pollution to undergo an evaluation for

emission of toxic air contaminants. Sources of emissions of toxic air contaminants are required to evaluate and use the best economically-feasible, technologically-advanced air pollution controls. This means that, as new technology progresses and new and better air pollution controls continue to be developed, each new or modified source will be required to consider the newest and best technology. Second, MDEQ engineers review the permit application to determine the amount of toxic air contaminants the facility might possibly emit after the best controls are installed. The facility is required to limit its toxic air emissions to amounts at or below those deemed safe for each toxic air contaminant and consistent with control technology determination. As knowledge and technology progress, these threshold levels will be reviewed for each toxic air contaminant and changed, if necessary.

**In summary, perhaps the best strategy is to avoid being classified as a major source in the first place and reduce or eliminate the use of toxic chemicals.** Basic process changes and pollution prevention measures can help achieve this goal. An accurate emissions inventory is essential for determining the status of a source.



## **6. What is involved in a permit to install application and how long can it take?**

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- Preliminary meeting
- The application package
- Content of supporting information
- Source specific guidelines
- Use of a consultant
- Timeframe

### **Preliminary meeting**

Although not always necessary, either the Air Quality Division staff of the local MDEQ district offices, the Lansing Permit Section staff, or the Wayne County Department of Environment (for Wayne County facilities) can be contacted prior to preparing a permit to install application. Such a meeting can be especially valuable for a company that has not had recent experience in applying for a permit to install.

Large new sources of air contaminants should meet with the MDEQ district air quality staff to review application procedures and to discuss design considerations for the new source. This would include such considerations as whether the proposed process is compatible with the local environment, where the source will be located (e.g., center of the property? at the property line?), and what impacts (e.g., odors) the source might have on neighboring properties.

Certain large sources may have to conduct ambient air monitoring at their proposed location for up to one full year before even submitting the permit to install application.

With the exception of facilities located in Wayne County, an applicant for an air use permit will also work closely with the Permit Section in Lansing and to some extent with the local district office. Wayne County has its own air quality regulations that incorporate state and federal regulations, and the Wayne County Department of Environment should be the first contact for companies in that county.

### **The application package**

One permit to install application package may be submitted for a number of similar individual types of processes or operations that are scheduled for simultaneous installation or alteration. For example, a permit to install application may cover several paint booths or a complete painting line. However, a permit to install application for a painting line should not, for example, also include a boiler and a chemical reactor.

Permit applications for large or complex projects or substantial modifications to existing facilities, should be discussed with the Permit Section in Lansing or Wayne County well in advance of submitting an

application. If you have questions, or would like to arrange a pre-application meeting, please contact the Permit Section at (517) 373-7023 or Wayne County at (313) 832-5000.

The Air Quality Division requires a permit application form for air use permits, but a complete application also includes supporting information. Other information may be required on a case-by-case basis. Source specific guidelines are available from the MDEQ.

The instructions for assembling the package should be followed carefully. Failure to do so may result in return of the application. A permit application package should be assembled in the following order:

- An air use permit application form
- Authorization letter (if needed)
- Supporting information

All sections of the package should be clearly identified and complete. Review of the application will be slowed by an incomplete submittal.

Two (2) copies of all materials need to be submitted in the application package. The originals of all additional information must be sent to Lansing (or Wayne County). You may elect to send the copy of the additional information with the original, or you may send it directly to the appropriate MDEQ district office. If you send the copy to the MDEQ district office, you must make sure to clearly indicate this fact with your submittal.

### **Air use permit application form**

The Air Use Permit Application form can be obtained from the Air Quality Division, Wayne County, or the MDEQ district offices. Remember as you fill out the Application form that the permit application reviewer may not be familiar with your facility. Provide sufficient and accurate detail so that the reviewer can understand your process or equipment. Make sure that all sections are completed, otherwise the application will be delayed. If the application form is not typed, the printing should be very legible.

There are ten items that need to be completed on the application form:

#### **1. Applicant name**

Item 1 asks for the business license name of the corporation, partnership, individual owner, or government agency name. The applicant should be the entity actually responsible for the equipment or source. Consulting or other firms cannot apply "on behalf of" an entity.

#### **2. Applicant address**

The address should be the mailing address for the applicant listing the number and the street.

### **3. Equipment or process location**

The equipment or process location may be different from the applicant address. It is important to specify the exact location of the equipment or process so that the site can be easily located by the MDEQ staff.

### **4. General nature of business**

Item 4 requires information on the general nature of the business. It may be helpful to refer to the Standard Industrial Classification (SIC) code for this description. Remediation projects should be classified separately from the overall nature of the business.

### **5. Equipment or process description**

You must supply at least a brief description of the equipment or process for this item. Be clear about the type of equipment (i.e., is it a baghouse? spray booth? boiler?). The description should be detailed enough that anyone not familiar with the process can understand what equipment the permit application covers and how this equipment will impact air quality. A more detailed description should be included as a separate part of the application package. Do not write in "see attached" for Item 5; you must provide at least a brief description. If the process description is lengthy, or specifics may be considered confidential, a brief and general description is acceptable under this item.

A Source Classification Code (SCC) is determined with reference to Table V, "General Instructions Supplement" which is part of the reporting package for the annual Michigan Air Pollution Report forms.

### **6. Facility codes**

Your facility's Standard Industrial Classification (SIC) code and State Registration (Emission Inventory) number can be determined from the Emission Inventory Reporting forms that you submit annually to the state. In addition, a list of SIC codes is available separately upon request from the MDEQ.

### **7. Action and timing**

Item 7 asks for the dates when installation, construction, reconstruction, or alteration; relocation; or change of ownership will be started and completed. Select only the items that apply. Note that the dates are "estimated" only. You should be aware that if no dates are provided, it will be assumed that the process is installed and operating.

**8. Name of prior owner, if any.**

Item 8 helps to trace prior owners and air use permits. If there are none, then indicate this on the form.

**9. Owner/authorized firm member certification**

This item names the responsible person for the facility listed in item 1. Be sure that the application is signed by the firm's owner or an authorized representative of the facility in item 1. Authorized agents such as consultants cannot sign the application form. It is important to provide a phone number for both items 9 and 10.

**10. Contact person name**

If the contact person is different from the person listed in item 9, this section must be filled in. If the contact person is not employed directly by the applicant, such as an attorney or a consultant, a letter of authorization must be provided pursuant to Rule 204 of the Department's rules. The letter should identify those individuals and/or firms that are expected to directly communicate with and/or provide information to the Department. Authorizations for several individuals and/or firms may be provided separately or may be combined into one letter. Any authorization letter(s) should immediately follow the application form in the application package. Failure to provide an authorization letter, where required, will result in the application being returned to the applicant.

**11. Disposition of application**

Do not write anything in this section. The section is for the MDEQ use only.

**AIR USE PERMIT APPLICATION**

For authority to install, construct, reconstruct, relocate, modify, or alter process, fuel-burning or refuse burning equipment and/or control equipment (permits to install are required by administrative rules pursuant to section 5505 of act 451, p.a. 1994 as

|                         |
|-------------------------|
| <b>FOR DEQ USE ONLY</b> |
| APPLICATION NUMBER      |

Please type or print clearly. For further instructions, see the reverse side of this form or contact the Air Quality Division at 517-373-7023.

|   |                         |   |
|---|-------------------------|---|
| 1. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency)   |                         |   |
| 2. APPLICANT ADDRESS: (Number and Street)   |                         |   |
| CITY: (City or Village)   | STATE                   | ZIP CODE  |
| 3. EQUIPMENT OR PROCESS LOCATION: (Number and Street) (If different than item 2.)   |                         | COUNTY:   |
| CITY: (City or Village)   |                         | ZIP CODE:   |
| 4. GENERAL NATURE OF BUSINESS:  |                         |   |
| 5. EQUIPMENT OR PROCESS DESCRIPTION: <b>A Description MUST Be Provided Here.</b> (Attach additional sheets, if necessary. Include Source Classification Codes [SCC]). |                         |   |
| 6. FACILITY CODES:  |                         |   |
| STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                                    |                         | STATE REGISTRATION (EMISSION INVENTORY) NO.: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| 7. ACTION AND TIMING: (Enter dates for those which apply)   | ESTIMATED STARTING DATE | ESTIMATED COMPLETION DATE   |
| INSTALLATION, CONSTRUCTION, RECONSTRUCTION OR ALTERATION:   |                         |   |
| RELOCATION:   |                         |   |
| CHANGE OF OWNERSHIP:  |                         |   |
| 8. NAME OF PRIOR OWNER, IF ANY:   |                         | PRIOR AIR USE PERMIT NUMBER, IF ANY   |
| 9. AUTHORIZED FIRM MEMBER CERTIFICATION:  |                         |   |
| PRINTED OR TYPED NAME:  | TITLE:                  | PHONE NUMBER: (Include Area Code)   |
| SIGNATURE:  |                         | DATE:   |
| 10. CONTACT PERSON NAME: (If different than name in item 9)   |                         | PHONE NUMBER: (Include Area Code)   |
| <b>11. DISPOSITION OF APPLICATION: FOR DEQ USE ONLY. DO NOT WRITE BELOW</b>   |                         |   |
| DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:  |                         |   |
| DATE PERMIT TO INSTALL APPROVED:*   | SIGNATURE:              |   |
| DATE APPLICATION / PERMIT VOIDED:   | SIGNATURE:              |   |
| DATE APPLICATION / PERMIT DENIED:   | SIGNATURE:              |   |
| *SUBJECT TO COMPLIANCE WITH ALL DEPARTMENT RULES AND THE CONDITIONS STIPULATED IN THE ATTACHED SUPPLEMENT.  |                         |   |

## **Supporting information**

In submitting the application package, be sure to include supporting information that will give the permit reviewer a clear idea of the process or equipment. General supporting information and specific supporting information will make the application easier to process and review.

The general supporting information includes:

- Process description
- Regulatory discussion
- Control technology analysis
- Emissions summary
- Stack parameters
- Site information
- Other supporting information
- Source specific guidelines

## **Content of supporting information**

The supporting information includes, but is not limited to the following as outlined by the MDEQ Air Quality Division:

### **I. Process description**

A detailed description of the process is necessary. This includes identification of the major pieces of process and control equipment by size and function. Ancillary equipment should also be identified to the extent of assisting in the description of the overall process and its emission points. Process flow sheets, layout drawings, and other diagrams should be included.

### **II. Regulatory discussion**

A discussion of federal, state and local air pollution regulations applicable to the process should be provided. Also discuss any other federal, state or local regulations applicable to the process.

### **III. Control technology analysis**

A description of how process emissions will be controlled is necessary. For sources subject to Best Available Control Technology requirements, separate handouts containing step-by-step instructions for completing BACT and T-BACT analyses are available from the MDEQ upon request.

#### IV. Emissions summary

- A. A one page summary for the process, covering all pollutants, in pounds per hour and tons per year, preferably in a tabular format.
- B. A one page summary for each vent/stack. List each toxic air contaminant individually and provide maximum pounds per hour, stack concentration in micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ), and predicted ambient impact in  $\text{ug}/\text{m}^3$ . Specify the method(s) used to determine the predicted ambient impact. Note: For some processes, detailed emissions by vent/stack may be unnecessary or inappropriate; in this case, the information on toxic air contaminants specified in this item should be provided under VII B.
- C. The normal and maximum operating schedule for the process and/or each vent/stack, in hours per day, days per week, and weeks per year.

Note that the maximum controlled emission rates for the process will be reflected in legally binding permit conditions. Therefore, all emission estimates should provide a reasonable margin of safety to ensure that the process can operate within these levels.

#### V. Stack parameters

For each vent/stack:

- A. Height above ground level
- B. Diameter (internal) or dimensions (internal)
- C. Orientation (vertical, horizontal, etc.)
- D. Exhaust volume flow rate, cubic feet per minute, noting actual or standard
- E. Exhaust gas temperature
- F. Description of any rain protection device
- G. Location of any stack testing ports
- H. Source Classification Code(s) and Control Equipment Codes for the process/equipment associated with each stack

Note that exhaust gases should be discharged unobstructed vertically upwards to maximize dispersion of air contaminants.

## VI. Site information

A site plan, preferably scaled, showing all of the following:

- A. Location of all exhaust stacks associated with the process
- B. All property and fence lines
- C. Dimensions (length, width, and height at roof peak and eaves), in feet, of all buildings and structures:
  - 1. within 150 feet of any process stack
  - 2. within a distance of 5 times the height of the building or structure of any process stack (e.g., a 50-foot building within 250 feet (= 5 x 50) of a stack should be included)
- D. North arrow and sufficient detail to enable the user to accurately orient the site to the surrounding area
- E. Scale (e.g., 1 inch = 100 feet)

## VII. Other supporting information

- A. Emission calculations (uncontrolled and controlled) for each process exhaust point, consistent with the information provided under item IV
- B. List of all toxic air contaminants, identified by Chemical Abstract Service (CAS) number, and any information on the toxicology of these contaminants
- C. Description of the proposed compliance monitoring and reporting plan for the process and control equipment
- D. Process and control equipment description/design information, including, but not limited to:
  - 1. efficiency calculations for control equipment
  - 2. description of any proposed control equipment bypass (Note that inputs to the process must cease immediately in the event of a bypass)
  - 3. applicable manufacturer's literature
- E. Description of any waste generated by the process or control equipment and the means of waste disposal
- F. Preventative maintenance plan(s) for the process and control equipment

## Source specific guidelines

Various source specific guidelines have been developed by the MDEQ. If your process or equipment is listed, obtain a copy of the latest guideline from either the Air Quality Division in Lansing, Wayne County or your MDEQ district office. The items in these guidelines should be incorporated into your application package under the appropriate supporting information section. The guidelines are as follows:

### Processes/Process Equipment

- Anhydrous Ammonia Storage
- Asphalt Plants
- Boilers
- Chemical/Pharmaceutical Processes
- Coating Operations
- Concrete Plants
- Crushers (Concrete, Asphalt, Rock)
- Degreasers
- Gas Turbines
- Incinerators - Medical Waste
- Incinerators - General Refuse
- Material Handling Operations
- Municipal Waste-to-Energy Facilities
- Natural Gas Sweetening Facilities
- Remediation Operations - Soil
- Remediation Operations - Groundwater
- Sour Oil and Gas Well Equipment
- Storage Tanks - General
- Waste Oil Firing Equipment
- Welding Operations

Guidelines for control equipment presently include:

### Control Equipment

- Afterburners
- Condensers
- Electrostatic Precipitators
- Fabric Filters (baghouse, cartridge)
- Scrubbers

**SPECIAL NOTE ON CONFIDENTIALITY:** All of the above information, and any requested on the process-specific sheets, CANNOT be claimed confidential except as provided for in Act 451, P.A. of 1994, and the Freedom of Information Act, P.A. 442 of 1976, as amended.

Two copies of the permit application and all supporting documentation should be mailed to:

Air Quality Division  
Michigan Department of Environmental Quality  
P.O. Box 30260  
Lansing, MI 48909

or for sources in Wayne County:

Air Quality Management Division  
Wayne County Department of Environment  
640 Temple Street, Suite 700  
Detroit, MI 48201

Questions regarding permit applications should be directed to the MDEQ Air Quality Division [Phone: (517) 373-7023], Wayne County [Phone: (313) 832-5000], or the local district office.

## Use of a consultant

Some companies find it useful to employ consultants to prepare permit applications. If a consultant is used, Rule 204 of the *Administrative Rules for Air Pollution Control* specifies that:

***When a person files plans and specifications as the agent of an owner, the owner shall furnish the agent with a letter of authorization for filing of the plans and specifications, and this letter shall be submitted with the plans and specifications.***

In other words, a letter from the responsible corporate official designating the consulting firm as an agent of the company must be included in the permit application submittal package. The permit reviewer will thus be able to directly contact the consultant to answer technical questions.

## Timeframe

Simple permit to install applications for facilities that have experience in preparation of permit applications could take less than a month to prepare. More realistically, allow one to three months to gather the information and perform the calculations for a permit to install application. More complex applications can take from three to six months or more. Applications for major sources or renewable operating permits could take a year to prepare, particularly if ambient monitoring is needed. The key is to plan ahead so that the need to obtain an air use permit does not slow down production or construction.

## Permit to install application checklist

| Component  | Completed |
|--|-----------|
| Air Use Permit Application form  |           |
| Signature by owner or authorized representative on Air Use Permit Application form |           |
| I. Process description   |           |
| II. Regulatory discussion  |           |
| III. Control technology analysis   |           |
| IV. Emissions summary  |           |
| V. Stack parameters  |           |
| VI. Site information (Site plan)   |           |
| VII. Other supporting information  |           |
| Source specific guideline materials  |           |
| Letter of authorization (if a consultant is used)                                  |           |
| Construction waiver letter (if needed)   |           |

## 7. What expenses may be associated with permit to install applications and with air emissions?

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- Application preparation costs
- Emissions fees

### Application preparation costs

Costs associated with air use permits include internal costs for preparing the permit application. There is no permit application fee involved in the permitting process with the exception of Wayne County where there has been a fee for a permit to install.

Application preparation costs are dependent upon the complexity of the source and whether your company has in-house expertise. Minimum costs involve person-hours for determining whether a permit is needed, preparing the application materials, and discussing permit conditions with the MDEQ. An emissions inventory may also need to be factored into the costs. Consultants can be hired to prepare the application and/or to perform an emissions inventory and stack testing.

### Emissions fees

The Michigan fee program for air emissions is tied into the federal renewable operating permit program requirements, not the permit to install requirements. It is effective from October 1, 1994 through September 30, 1998. The annual air quality fee for a major source is a combination of a facility charge and an emission charge. A key element of the fee program is the collection of emission information. All owners and operators of major emitting facilities are required to submit emission information to the MDEQ by March 15 of each year. There is a penalty if this information is not submitted by April 15.

The fee schedule is based upon emission amounts and source classification. There are different fees for three categories of facilities:

Category I: Facilities that have the "potential to emit" (PTE) one or more of the non-hazardous air pollutant (HAP) regulated air contaminants in excess of 100 tons/year threshold. These facilities can also have a "potential to emit" in excess of 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs.

Fee: \$2,500 facility charge and an emissions charge based on the amount of pollutants that a facility emits.

Category II: Facilities whose PTE is in excess of 10 tons/yr of any one hazardous air pollutant (HAP) or 25 tons/yr of any combination of HAPs; and/or are subject to a federal New Source Performance Standard (NSPS). Category II facilities cannot have a PTE greater than 100 tons per year of any regulated air contaminant or single HAP.

Fee: \$1,000 facility charge and an emissions charge.

Category III: Facilities that have sources that are regulated by federal National Emission Standard for Hazardous Air Pollutants (NESHAPs). These facilities have a "potential to emit" below the emission thresholds for "major sources."

Fee: Annual fee of \$200.

The fee structure for Category I and II facilities is similar. There are two components to the annual fees for Category I and Category II facilities which are: facility charges determined by the "potential to emit" and emission charges based on actual emissions.

The emission charge for Category I and Category II facilities is based on the previous year's reported emissions to Michigan's Air Quality Division Emission Inventory. Fee subject air pollutants are all regulated air contaminants except carbon monoxide. Carbon monoxide is used to determine if a facility is a Category I source, but is NOT a fee subject air pollutant.

Fees are levied at a rate of \$25 per ton of actual emissions. Facilities will not be charged for fee subject air emissions above 4,000 tons per year (there is a \$100,000 fee ceiling). Facilities that emit less than 4,000 tons per year of emissions will have a maximum fee charge based on a ceiling cut off of 1,000 tons per year per pollutant.

Category III facilities that are NOT major sources, but are subject to federal National Emission Standard for Hazardous Air Pollutants (NESHAPs) requirements, pay a flat annual fee of \$200.

The MDEQ will notify the owner or operator of each facility that is subject to fees of the assessed annual air quality fee. The assessed fee is due within 90 days of the mailing date of the air quality fee notification. A penalty will be assessed for unpaid fees. If there is reason to believe that the fee is not correct, a facility can challenge the air quality fee by notifying the department in writing within 30 calendar days of the mailing date of the air quality fee notification.

## 8. What happens after a permit to install application is submitted?

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- Screening for administrative completeness
- Supervisors' review
- Prioritization of permit applications
- Working with the permit reviewer

*The following sections refer to the specific procedures of the MDNR Air Quality Division. Applicants from Wayne County should consult the Wayne County air quality staff for their procedures.*

### Screening for administrative completeness

As air use permit applications are received at the MDEQ Air Quality Division, they are date stamped by the section secretary and forwarded to the permit screener for a preliminary check for completeness. This screening consists of a procedural review and a technical information review. The following items are checked in the procedural review:

#### General Information

- Is the general company identifying information, including equipment location, provided?
- Is the application signed by the owner/operator? (Authorized agents/consultants may not sign the application)
- Is an authorized agent letter required? Is it included?

#### Waiver Request

- Is a construction waiver requested?

The next phase of the screening is the technical information review which asks:

- Is the application clear in its statement of what the application covers? (i.e., new equipment? add-on control equipment? existing equipment/Rule process 201 violation? modification of existing equipment? modification of with no change in equipment?)

### Emission Rates

- Are basic emission calculations and emission rates provided?
- Is the operating schedule described?
- Are emission rates of toxic air contaminants and predicted ambient impacts described?
- Is it apparent from which equipment the emissions occur?

### Stack Information

- Are stacks described in sufficient detail to associate with equipment and emission rates?
- Are stack locations provided on a site plan?
- Are the following stack parameters provided for each stack?
  - Height above ground
  - Diameter
  - Volumetric flow rate, acfm or scfm
  - Exhaust gas temperature
  - Orientation - vertical or horizontal
  - Description of rain protection

### Site Description

- Is there adequate site description information provided, including building dimensions, distances to property line, location of stacks or other emission points?
- Is the site plan drawn to scale?
- Is an additional information letter needed?

Incomplete permit applications may be returned to the sender with a checklist of what is missing. Applicants should make a concerted effort to submit complete applications to avoid delay.

## **Supervisors' review**

The applications are then collected for the Air Quality Division (AQD) Unit Supervisors' review. The Supervisors meet at least weekly to evaluate the 35 to 50 permit applications that arrive at AQD each week. The permit applications generally fall into several categories: relocations, incomplete applications, and those which can be assigned to either one of the three permit section units based on the type of source or to any unit. The three permit section units are the Thermal Process Unit, the Chemical Process

Unit, and the General Manufacturing Unit. The Thermal Process Unit handles permit applications for processes that primarily involve combustion or heated materials to arrive at a final product. The Chemical Process Unit is in charge of sources whose primary process involves chemical reactions and/or emissions of non-criteria pollutants, including disposal of hazardous materials. The General Manufacturing Unit is concerned with sources whose primary process involves mechanical operations, rather than combustion or chemical reaction, in arriving at a final product.

## **Prioritization of permit applications**

In the past, the substantially complete permit applications were prioritized by the Unit Supervisors into four classes which took into account the complexity and status of the application. This is no longer the case. Substantially all applications are now processed in order of receipt.

The permit applications are first reviewed for completeness. They are then assigned a number based on the chronological date of receipt and assigned to a permit engineer. The MDEQ has a computerized system to log in permit applications. This allows the permit staff and districts to track a given permit. A computer-generated letter is sent to applicants informing them that their permit applications have been received and a copy of the permit application is sent to the appropriate MDEQ district office. This letter is specific for a given unit and process and informs the applicant of the permit number and the class assignment.

## **Working with the permit reviewer**

After being logged into the computer system, the permit applications are filed in a central file under the appropriate assigned unit. The Supervisors then assign applications to the permit reviewers in their units. To equalize the workload, Supervisors may pull applications from another unit. An individual reviewer normally has 30-40 permit applications in his/her office at one time.

The permit application will be given to a permit reviewer in either the Thermal Process, Chemical Process, or General Manufacturing unit, depending upon the source. When the file is assigned to a permit reviewer, the actual review of the application can begin. The assigned permit reviewer is the main contact person for questions and information regarding the application.

Upon receipt of an air use permit application for review, the permit reviewer is to conduct an initial review within ten days. The permit reviewer makes a judgement about the adequacy of the information provided (i.e., is it sufficient to complete the review?). The permit reviewer is also making an assessment about the source's ability to comply with state, federal, and local air quality regulations. Applicants will be notified if the proposed process or process equipment does not comply with regulations and will be asked to

amend the application in order to demonstrate compliance.

The reviewer estimates the time necessary to complete the review. If a substantial amount of information is missing, the applicant will be sent a letter requesting the information. Applicants are asked to respond within 30 to 90 days depending on the anticipated complexity of the request. Requests for lesser amounts of information are frequently handled verbally. The applicant can expedite review by responding promptly to requests. Applications are preferentially reviewed in order of the date received; however, the permit reviewer has some flexibility in this regard.

An overall review of the application for completeness often reveals omissions of minor items. The applicant should make sure that all sections of the application form are properly completed. Prior to submittal, all calculations should be reviewed for accuracy and applicability. Supplemental information should be complete and presented in an organized manner, preferably as indicated in the application package.

If coordination is required with other units/sections of the Air Quality Division, another Division of the MDEQ, or another agency, the permit reviewer will complete these requests after the initial review. Areas of coordination include: the local District Office, Enforcement Unit, Modeling Unit, stack sampling, Toxics Unit, Waste Management Division, Surface Water Quality Division, Environmental Response Division, Land and Water Management Division, Geological Survey Division, and Law Enforcement Division. Dispersion modeling and some other coordination work may not be able to be completed until after further review due to the type of information that must be provided for these requests.

The local District Office will be apprised of the permit application. This office has thirty days in which to respond with concerns about the application. The District Office may communicate concerns about the proposed location and/or a facility's air quality compliance history. The District Office staff may perform a site review of the proposed location or source.

## 9. How does a permit to install get issued?

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- Development of a draft permit to install
- Action on permits: staff issuance and public comment opportunity

### Development of a draft permit to install

On the basis of the information in the application package and federal/state rules, the permit reviewer will develop a draft permit to install with specific conditions. The draft permit will be sent to the local MDEQ District Office and the applicant for review. Draft permits contain conditions which are reasonably necessary to assure compliance with air quality rules and regulations [Rule 201(3)]. Permit conditions need to be enforceable and reasonable. The applicant should review all permit conditions to determine if limits on processes, control equipment, and emissions are feasible and can be met.

All permits will have general conditions that are generally not negotiable. These conditions should be read carefully and the applicant should ask questions about any of the conditions that need clarification. General conditions reiterate air quality rules and regulations.

Special conditions are also a part of a draft permit. The combination of special conditions will likely be unique to a source. Special conditions contain: emission rate limitations; visible emission limitations; requirements for use of air pollution control equipment; emissions testing; monitoring, recordkeeping, and reporting requirements; production rate limits; and hours of operation limits.

An important permitting issue involves toxic air contaminants, as outlined in Rules 230, 231, and 232 of the *Administrative Rules for Air Pollution Control*. An applicant must propose acceptable control technology for toxic air contaminants. The permit reviewer determines the acceptability of the control equipment and reviews dispersion modeling. The ambient impact of a toxic air contaminant is compared to the screening level for that specific compound. A screening level list is available from MDEQ so an applicant can check compliance if a screening level has been developed for the specific toxic air contaminant. The applicant's demonstration of compliance in an application reduces the review time.

If unacceptable ambient impacts are indicated, the permit reviewer will notify the applicant and commence discussion in an effort to resolve the situation. This may include additional work on the control technology determination and dispersion modeling review. The applicant's acceptance of enforceable permit conditions that limit the emission of toxic air contaminants is usually an important part of these discussions. If all ambient impacts are acceptable, the permit reviewer will complete the draft permit conditions and send them to the applicant for review. Dialogue between the applicant and the permit reviewer will continue as necessary.

The applicant should take the opportunity to comment on the draft permit and meet with the permit writer, if necessary. The draft permit must comply with regulations, but it should also be workable for the applicant. Sometimes a draft permit will be verbally discussed with the applicant rather than a written draft developed. This is done for simple, straightforward permits or with applicants who are very knowledgeable of the permitting system.

## **Action on permits: staff issuance and public comment opportunity**

After completion of the permit review, the draft permit to install is placed into one of three categories for final processing. The categorization is based on whether the facility is subject to federal regulations and whether the proposed action is expected to be controversial with the general public. The three categories are: noncontroversial state permits, noncontroversial federal permits, and controversial state and federal permits. Permit denials will be handled in the same manner as the controversial state and federal permits.

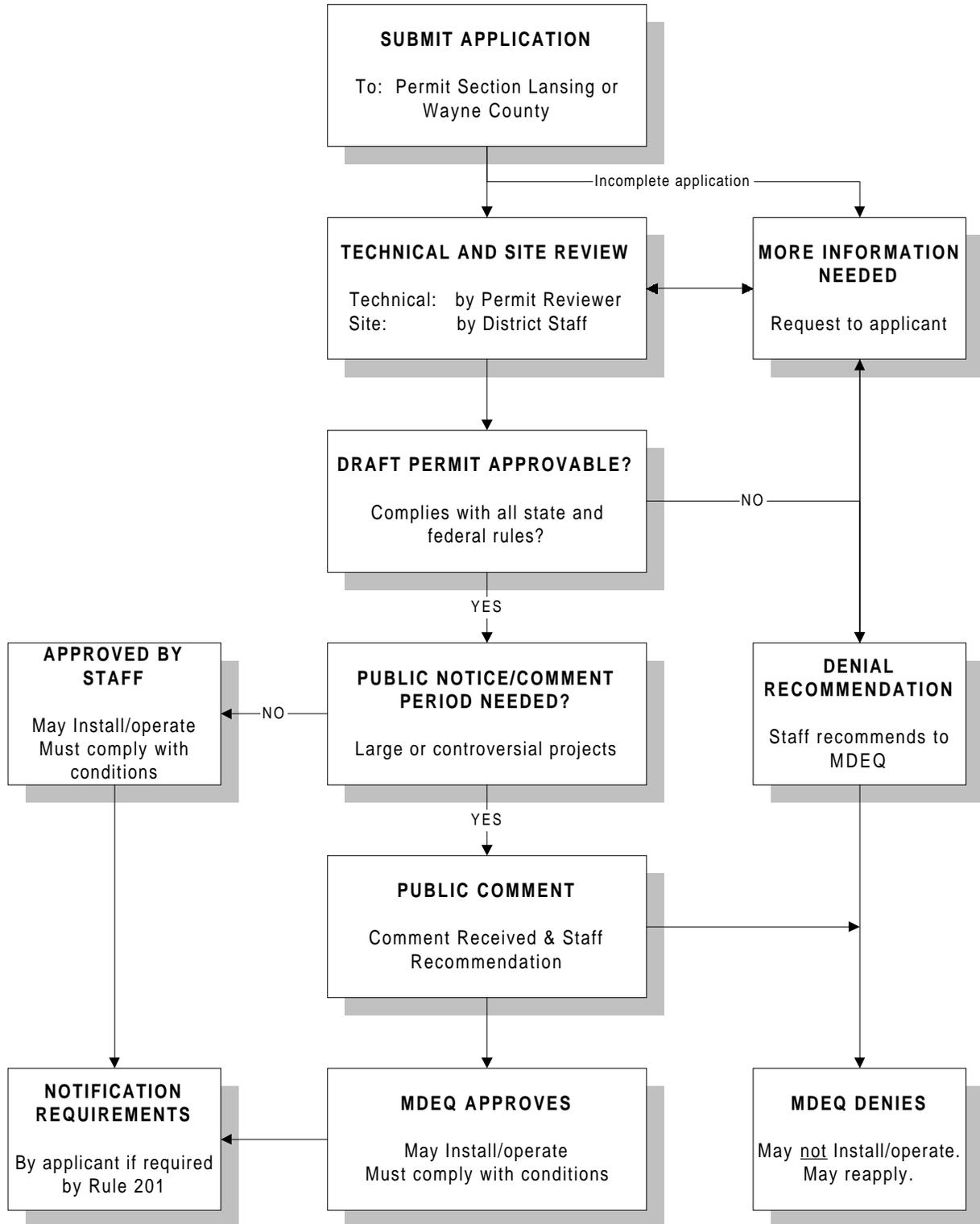
Noncontroversial state permits have no public notice and hearing requirements as long as there is no known public controversy. Decisions on these permits are made by the Permit Section Supervisor as delegated by the Department Director. These permits can be issued upon completion of the review, draft permit development, acceptance of the draft permit by the applicant, and review by the Supervisor.

Noncontroversial federal permits are those permits which are issued by the state and include federal Prevention of Significant Deterioration (PSD) or major offset requirements. These applications, while they have no known substantial and relevant public controversy, are subject to federal public notice and comment requirements, and a hearing, if requested. Upon completion of the permit review, the draft permit and proposed decision are noticed for a 30 day comment period. There is opportunity for a public hearing on the permit. This hearing would be placed on the Department Calendar and would take place before the Permit Section Supervisor who is usually the designated decision maker. Following the end of the comment period and the hearing (if held), all comments received are reviewed and a determination is made as to whether there are unresolved issues. If no substantial and relevant unresolved issues remain, the permit is issued with the approval of the Permit Section Supervisor. If substantial and relevant unresolved issues remain, the permit would be scheduled for a public meeting with the Office of the MDEQ Director. Notice would be provided to all affected parties. A decision would then be made on the permit.

Controversial state and federal permits involve substantial and relevant known public controversy. Upon completion of the permit review, there is public notice of the proposed decision and draft permit, a 30 day comment period, and public meeting date. In most cases, the public meeting will be held with a representative from the Office of the MDEQ Director, after which a decision on the permit will be made by that designated person.

The primary reasons for denial are either the application is incomplete or the proposed equipment will not comply with regulations.

# Permit to install review and approval



## 10. How long does it take to process a permit to install?

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- Variables in processing a permit application
- Construction waiver

### Variables in processing a permit application

Many factors influence how long it may take for a permit to install to be issued. Among these factors include:

- Number of other permits at AQD needed to be processed
- Class assignment of the permit
- Completeness of the permit application
- Timeliness of response by applicant to AQD inquiries
- Degree of complexity of the process or process equipment
- Amount of review necessary
- Necessity of public participation
- Status of source (major or minor)
- Type of air contaminant (criteria pollutant or toxic)
- Location of source (attainment or nonattainment area)

It is possible for simple, noncontroversial permits to install to be issued in one to two months. More complex or controversial permits may require six months to a year. Your permit application reviewer may be able to give you a sense of how long a particular permit may take. You can expedite the process by responding to all inquiries in a prompt manner.

### Construction waiver

Through Rule 202 of the Administrative Rules for Air Pollution Control, the applicant can apply for a construction waiver. However, a waiver does not insure that a permit will be issued and the applicant proceeds with construction at his/her own risk.

Rule 202 addresses requests for waivers of the requirements of Rule 201 to begin construction of a source prior to receipt of an approved permit to install. The request for a construction waiver needs to:

- Be in writing
- Explain circumstances that will cause undue hardship to applicant
- Be signed by the owner or authorized agent
- Be acted upon within 30 days

The applicant may request a waiver only if an application for a permit to install has been submitted to the MDEQ Air Quality Division. Construction waivers cannot be issued to PSD sources or potential PSD sources, including sources netting out of PSD requirements.

## **11. How does a facility comply with a permit to install?**

- Notification requirements (Rule 201)
- General and specific conditions in a permit to install
- Compliance inspections
- Noncompliance

### **Notification requirements**

After a permit to install has been issued, the process or process equipment can operate as long as permit terms and conditions are met. Under the recently revised rules, a modification of Rule 201 requires the following notification requirements:

- Within 30 days after completion of installation, construction/reconstruction, relocation, alteration or modification, notify the MDEQ in writing of this completion.
- Within 18 months after completion of the above, notify the MDEQ of compliance with the terms and conditions of the permit to install.

The compliance notification needs to include all of the following:

1. Results of all testing, monitoring, and recordkeeping to demonstrate compliance
2. A schedule of compliance
3. Signed statement that the information is true, accurate and complete

### **General and special conditions in a permit to install**

To determine compliance with a permit to install, a source needs to refer to the general and special conditions of the permit to install. General permit conditions are found in all permits to install. They cover such items as general compliance and notification requirements, protection of air quality, changes in process or ownership, and substitution of materials.

Special permit conditions depend on the type of source and the location of the source. These conditions may involve:

- Emission limits
- Production limits
- Operation limits
- Fuel/materials limits
- Monitoring requirements
- Reporting requirements
- Start-up/shutdown/malfunction restrictions

The *Administrative Rules for Air Pollution Control* address control of various pollutants through emission limitations. Sources need to comply with both the *Administrative Rules* and conditions in the permit. Sometimes the standards/limits will be the same and sometimes not. For example, an existing source of volatile organic compounds (VOCs) may have an old permit to install which contains certain limits. If the source is subject to Part 6 of the *Administrative Rules*, the limits may be more restrictive (i.e., allow less pollution) than what is written in the permit. An example of a more restrictive limit in a permit than in the *Administrative Rules* would be the case of a company accepting a more restrictive limit to avoid dispersion modeling. Engineering calculations or data from stack testing and continuous emission monitors may be the basis for determination of actual emissions.

A production limit can restrict the amount of final product that can be produced based on emissions during a period of time. An operational limit restricts the way the process or process equipment is operated and may specify air pollution control equipment, hours of operation, amounts of raw materials and fuel, flow meters, or continuous emission monitors.

A self-monitoring audit should take place on an ongoing basis so that a company can anticipate if emission limits will be exceeded and make corrections. Frequently, noncompliance is caused by operators who are not aware of air quality requirements. Plant personnel should be adequately trained and made aware of requirements. Equipment and monitoring devices need to be periodically inspected so problems can be corrected before noncompliance occurs.

It may be difficult to meet all of the permit conditions during times of start-up/shutdown/malfunction. There are specific measures that need to be taken during malfunctions that include a written preventive maintenance and malfunction plan, alternative operating procedures, interim control measures, reductions in production, monitoring requirements, and recordkeeping requirements. For malfunctions that cause emissions over a time period specified in Rule 912, either a notice or a written report must be given to the MDEQ.

## **Compliance inspections**

A facility should anticipate inspections by the MDEQ district air quality staff to determine compliance. Major stationary sources of air contaminants are inspected on a targeted basis and in response to citizen complaints. Minor sources can also expect to be inspected periodically. It is only a matter of time before a given facility is inspected. The responsibility for compliance is on the owner and operator of a facility, not the U.S. EPA or MDEQ. The costs of compliance and liability for outstanding compliance issues will increase the longer the violation exists. It is usually more cost effective to solve rather than litigate a problem.

Compliance inspections focus on:

- Records of process and control equipment and facility operation
- Material usage
- Production and emission rates
- Required monitoring data and testing results
- Reports related to compliance with emission limitations and standards
- Collection of samples of atmospheric emissions

The elements of an inspection can be anticipated by determining the:

1. Process or process equipment that is required to have permits
2. Limitations, conditions and schedules in permits and orders issued by U.S. EPA and the MDEQ
3. Applicable emission standards
4. Requirements for testing, monitoring and reporting
5. Notification and response duties of an owner or operator where a threat of release or release exists
6. Records required to be kept by applicable regulations

**The applicant should take the initiative to contact the MDEQ or other sources of information if there are questions about the regulations and what the agency considers necessary for compliance.** Information about other similar facilities may be available and help to evaluate compliance alternatives and costs.

## Noncompliance

**A permit to install can be revoked if the process or process equipment is not in compliance.** Other reasons for revoking a permit would be when a permit to install has been obtained by misrepresentation or there is a failure to disclose all relevant facts. There is, however, a requirement for a notice and opportunity for a hearing prior to revocation. Revocation of a permit makes operating a process or process equipment illegal.

Effective March 15, 1994, violations of the air use permit rules including terms of a permit can draw administrative fines, civil action and fines, and criminal action. There is a provision in *Part 55, P.A. 451 of 1994* for the person responsible for the alleged violation to enter into an agreement with the MDEQ to correct the alleged violation. This agreement could involve monetary or other relief and is in the form of a consent order with a specific compliance schedule.

## 12. What happens if the process, equipment, or operation needs to be changed?

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- Permit to install modifications
- Renewable operating permit modifications

### Permit to install modifications

During the life of the nonrenewable permit to install, it is likely that changes may need to be made in operations, equipment replaced or relocated, processes modified, or different raw materials used. These modifications can impact on the emissions allowed by a permit and the ability to comply with existing permit conditions. Several scenarios regarding modifications are possible depending upon the type of modification. A source may:

- Be able to have some changes allowed within limits of the permit
- Need a new permit to install
- Be exempt [Rule 285(a),(b),(c)]

The special permit conditions for a given permit to install may allow some flexibility in hours of operation, substitution of materials, or other changes. The Air Quality Division can help interpret these permit conditions. Also, the definition of "modify" in the *Rules* should be consulted. A modification of concern is one that increases the amount of any air contaminant beyond the permit limits or results in the emission of a toxic air contaminant not previously emitted. This may trigger that need for a new permit to install.

Routine maintenance, parts replacement, or other repairs that are minor may be exempt from a permit to install as noted in Rule 285(a) of the *Administrative Rules for Air Pollution Control*. A process change such as raw material substitution may be exempt under Rule 285(b) if it does not involve a meaningful change in the type or quantity of an emission. Relocation of process equipment within the same geographic site that does not change emissions does not require a new permit, as long as the air pollutant impacts are not greater than those of the original location.

### Renewable operating permit modifications

Modifications involving renewable operating permits are addressed in Rule 216 of the *Administrative Rules for Air Pollution Control*. The rule addresses administrative permit amendments, minor permit modifications, and significant modifications. Administrative permit amendments include incorporation of a permit to install into a renewable operating permit. Minor permit modifications include changes involving exempt process and process equipment and certain production or operational limits.

## 13. Where do I find out about more specific requirements for an air use permit?

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- Michigan Department of Environmental Quality
- Wayne County Department of Environment
- State publications: Michigan Act 451
- Federal publications: *Code of Federal Regulations (CFR)*, *Federal Register*
- Various organizations, attorneys and consultants
- Air Use Permit Technical Manual

Many information sources are available for assistance with questions about air quality issues. These sources include:

### Michigan Department of Environmental Quality

The Air Quality Division (AQD) of the Michigan Department of Environmental Quality (MDEQ) is the agency that receives permit applications and writes most of the air use permits except those for Wayne County. A specific air use permit reviewer will be assigned to process a permit application and will be the main contact point for questions.

The Air Quality Division publishes a periodic newsletter, *About the Air*, and the MDEQ distributes a Department Calendar. The contact number for these publications is (517) 373-7023, or write to:

MDEQ Air Quality Division  
P.O. Box 30260  
Lansing, MI 48909-7528

For the MDEQ Air Quality Division purposes, Michigan is divided into three regions with nine district offices. Wayne County has its own air quality office and program. Air quality district staff perform compliance inspections, make recommendations for enforcement actions, maintain files on individual facilities, review permit applications at the request of the Air Quality Division in Lansing, and perform site evaluations. District staff can be helpful in determining an appropriate site for a plant and for general compliance issues. Phone numbers for the districts and Wayne County are:

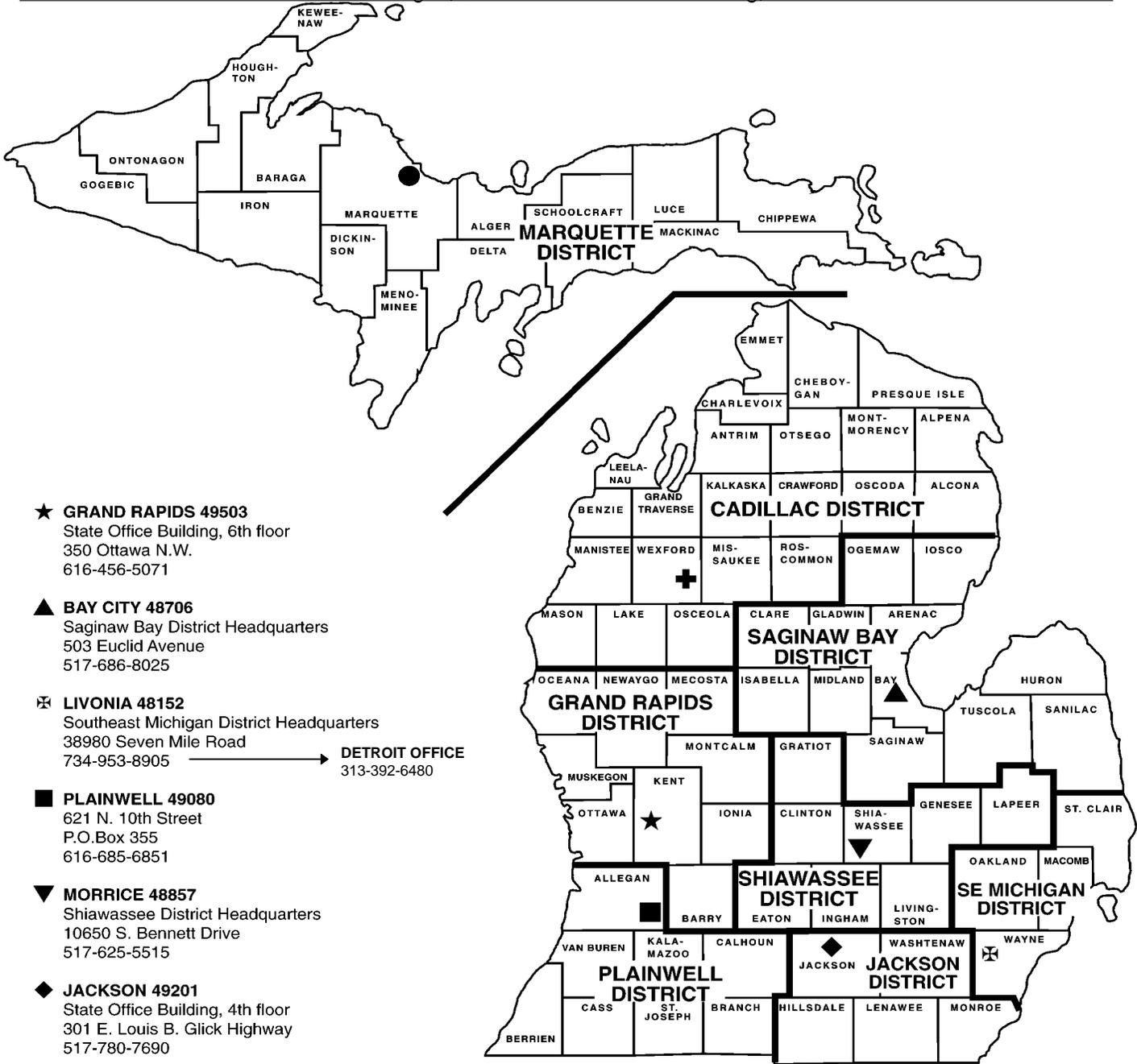
|               |                |
|---------------|----------------|
| Cadillac      | (616) 775-3960 |
| Gaylord       | (517) 731-4920 |
| Grand Rapids  | (616) 456-5071 |
| Jackson       | (517) 780-7690 |
| Marquette     | (906) 228-6568 |
| Plainwell     | (616) 685-6851 |
| Saginaw Bay   | (517) 686-8025 |
| S.E. Michigan | (734) 953-8905 |
| Shiawassee    | (517) 625-5515 |
| Wayne County  | (313) 833-7030 |



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

District Boundaries and Offices

John Engler, Governor ♦ Russell J. Harding, Director



★ GRAND RAPIDS 49503  
State Office Building, 6th floor  
350 Ottawa N.W.  
616-456-5071

▲ BAY CITY 48706  
Saginaw Bay District Headquarters  
503 Euclid Avenue  
517-686-8025

⊠ LIVONIA 48152  
Southeast Michigan District Headquarters  
38980 Seven Mile Road  
734-953-8905

→ DETROIT OFFICE  
313-392-6480

■ PLAINWELL 49080  
621 N. 10th Street  
P.O. Box 355  
616-685-6851

▼ MORRICE 48857  
Shiawassee District Headquarters  
10650 S. Bennett Drive  
517-625-5515

◆ JACKSON 49201  
State Office Building, 4th floor  
301 E. Louis B. Glick Highway  
517-780-7690

● MARQUETTE 49855  
1990 U.S. 41 South  
906-228-6568

+ CADILLAC 49601  
120 W. Chapin St.  
616-775-3960 → GAYLORD OFFICE  
517-731-4920

WAYNE CO. DEPT. OF ENVIRONMENT

Air Quality Management Division  
640 Temple, Suite 700  
Detroit, MI 49201  
313-833-7030

ENVIRONMENTAL ASSISTANCE CENTER  
(for general information):  
Email: deq-ead-env-assist@state.mi.us  
DEQ Internet Home Page: www.deq.state.mi.us

Pollution Emergencies: 1-800-292-4706  
Telephone: 1-800-662-9278  
Fax: 1-517-241-0673

Revised 12/18/97

Small businesses that lack a sophisticated technical staff to perform the above actions can get help from a new state program, the Michigan Small Business Clean Air Assistance Program. The program is managed by the Environmental Services Division and has the following duties:

- Identify applicable requirements and provide assistance for compliance with those requirements, including preparation of permits.
- Provide information on pollution prevention methods and accidental release prevention and detection.
- Disseminate information which clearly delineates all legal rights to which small businesses are entitled.
- Provide small businesses with a listing of consultants that can provide audits of the operations of a source to determine compliance.

The Small Business Clean Air Assistance Program can be reached by calling (517) 373-0607 [Fax (517) 335-4729]. Generally, businesses with 100 or fewer employees will be eligible for assistance.

## **Wayne County Department of Environment**

All facilities in Wayne County are subject to Wayne County air quality regulations as well as state regulations. As previously mentioned, the Wayne County Agency that handled air permits was the Wayne County Department of Public Health. However, reorganization efforts created the Wayne County Department of Environment. The Wayne County Department of Environment will oversee a full service, local agency. The county has its own air pollution ordinance, compliance monitoring staff, and permit review capability. Businesses in Wayne County should contact the Wayne County Department of Environment (i.e., Department of Health) Air Quality Management Division at (313) 833-7030 for more details.

### **State publications: *Michigan Act 451 and Administrative Rules***

In 1965, the Michigan state legislature addressed air pollution problems with the passage of the Michigan Air Pollution Act, Act 348, 1965, as amended. The 1965 Act has been amended numerous times to reflect the changes in federal air quality legislation and changes in the direction of the Michigan air program. Recently, the Act was codified as *Part 55 of the Natural Resources and Environmental Protection Act, P.A. 451 of 1994*. An applicant for an air use permit should always consult the most recent version of the Act and its rules.

Specifically, a permit applicant will need the most current copy of the Michigan *Natural Resources and Environmental Protection Act, P.A. 451 of 1994* and the *Administrative Rules for Air Pollution Control* (Michigan Air Pollution Control Commission General Rules, M.A.C. R 336.1101 et seq.) which can be obtained through the MDEQ Air Quality Division for a charge to

cover printing and mailing costs. The effective date of the rules was August 15, 1967. New rules are continuously being established so it is important to use only the most recent update of the Act and the rules. Act 250 of 1965, as amended, which is the Tax Exemption Act, should also be consulted. Certain air pollution control equipment may be eligible for a tax exemption.

## **Federal publications: *Code of Federal Regulations (CFR)*, *Federal Register***

Existing federal regulations pertaining to air emissions can be found in Title 40 of the *Code of Federal Regulations* (CFR) which pertains to the protection of the environment. Changes in these regulations and proposed rules appear daily in the *Federal Register*, but government printed bound copies of Title 40 of the CFR are revised only about once a year.

Title 40 of the CFR is organized into over 1500 parts. However, only a limited number of parts apply to air permit issues. For new sources, "Standards of Performance for New Stationary Sources" is important (Part 60). "National Emission Standards for Hazardous Air Pollutants" sets the standards for limits on hazardous air pollutants (Part 61 and 63). The 40 CFR Part 61 sections contain the NESHAPs which were promulgated prior to the 1990 Clean Air Act Amendments and 40 CFR Part 63 contains the NESHAPs for specific source categories as established by the CAAA. Part 51, Subpart I, "Review of New Sources and Modifications" and "Prevention of Significant Deterioration of Air Quality" (Part 52.21) are important for New Source Review.

Part 50 contains the National Ambient Air Quality Standards and ambient monitoring methods. Details on approved State Implementation Plans are found in 40 CFR 52 with the attainment status of each area listed in 40 CFR 81. Part 70 outlines the new federal operating permit program.

The *Federal Register* updates existing regulations and contains supporting documentation for all proposed U.S. EPA regulations. When a regulation is enacted or changed, the new section will be published in the *Federal Register*. Air quality regulations are found in the Environmental Protection Agency section.

The U.S. EPA has numerous guidance documents that are available for specific sources. ***AP-42: EPA Compilation of Air Pollutant Emission Factors*** is a valuable reference for general descriptions of different manufacturing processes and for estimating the amount of emissions resulting from these processes. ***AP-40: Air Pollution Engineering Manual*** describes the control of pollution at various types of sources, and discusses the practical engineering problems of design and operation associated with each type of source.

*AP-42* and applicable parts of the *Code of Federal Regulations* and the *Federal Register* can be ordered through:

Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402 Phone: (202) 783-3238

## Various organizations, attorneys and consultants

It is important to keep current on the MDEQ rules and policies through interaction with the MDEQ and through various trade or community organizations. Highly technical questions can best be answered by the Air Quality Division staff in Lansing, district air quality staff, and/or consultants.

Air quality issues are a topic of interest for numerous organizations throughout Michigan. Trade organizations are a good source of topical information. The Michigan Manufacturers Association, the Michigan Chamber of Commerce, Michigan Chemical Council, and other trade organizations hold conferences to update their members on air issues and they have active air quality committees. The Air & Waste Management Association has two chapters in Michigan that organize regional events, and the national organization sponsors conferences, workshops, and teleconferences on air topics. There are many other groups that also can help with air quality issues.

Law firms frequently plan conferences that can assist a company in understanding air quality regulations. They also offer consultation on permit compliance/enforcement issues. Environmental and engineering consultants can prepare air use permit applications, perform air monitoring and stack sampling, and design air pollution control systems.

## Air Use Permit Technical Manual

Topics in this guide are covered in greater detail in other portions of the ***Michigan Air Use Permit Technical Manual***. For information regarding the manual, contact:

Clean Air Assistance Program  
Michigan Department of Environmental Quality  
State of Michigan  
P.O. BOX 30457  
Lansing, Michigan 489909-7957  
Phone: 800-662-9278; Fax: 517-335-4729  
E-Mail:

# Acronyms

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|                |  |
|----------------|--|
| <b>acfm</b>    | Actual cubic feet per minute   |
| <b>Act 348</b> | Michigan Air Pollution Act, Act 348, 1965, as amended, (M.C.L.A. §336.11 to 336.36)  |
| <b>AQD</b>     | Air Quality Division of the Michigan Department of Environmental Quality   |
| <b>BACT</b>    | Best Available Control Technology  |
| <b>Btu</b>     | British thermal unit. The amount of energy required to raise the temperature of a pound of water one degree Fahrenheit from 39.2 degrees Fahrenheit. |
| <b>CAA</b>     | Federal Clean Air Act  |
| <b>CAAA</b>    | Federal Clean Air Act Amendments of 1990   |
| <b>CAS</b>     | Chemical Abstract Service  |
| <b>CFR</b>     | Code of Federal Regulations  |
| <b>CTG</b>     | Control Technique Guideline  |
| <b>FR</b>      | <i>Federal Register</i>  |
| <b>GACT</b>    | Generally Available Control Technology   |
| <b>HAP</b>     | Hazardous Air Pollutant  |
| <b>LAER</b>    | Lowest Achievable Emission Rate  |
| <b>MACT</b>    | Maximum Achievable Control Technology  |
| <b>MDEQ</b>    | Michigan Department of Environmental Quality   |
| <b>MDNR</b>    | Michigan Department of Natural Resources   |
| <b>NAA</b>     | Nonattainment Area   |
| <b>NAAQS</b>   | National Ambient Air Quality Standards   |
| <b>NESHAPs</b> | National Emissions Standards for Hazardous Air Pollutants  |
| <b>NSPS</b>    | New Source Performance Standards, or Standards of Performance for New Stationary Sources   |
| <b>NSR</b>     | New Source Review  |

|                 |  |
|-----------------|--|
| <b>PM-10</b>    | Particulate matter that measures 10 microns in diameter or less which is a size considered small enough to invade the alveolar regions of the lung. PM-10 is one of the six pollutants for which there is a national ambient air quality standard. |
| <b>PSD</b>      | Prevention of Significant Deterioration  |
| <b>RACM</b>     | Reasonably Available Control Measure   |
| <b>RACT</b>     | Reasonably Available Control Technology  |
| <b>SCC</b>      | Source Classification Code   |
| <b>scfm</b>     | Standard cubic feet per minute   |
| <b>SIC</b>      | Standard Industrial Classification Code  |
| <b>SIP</b>      | State Implementation Plan  |
| <b>TAC</b>      | Toxic Air Contaminant  |
| <b>T-BACT</b>   | Best Available Control Technology for Toxics   |
| <b>tpy</b>      | Tons per year  |
| <b>USC</b>      | United States Code   |
| <b>VOC</b>      | Volatile Organic Compound  |
| <b>U.S. EPA</b> | United States Environmental Protection Agency  |

# Glossary

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**Administrative Rules For Air Pollution Control:** The rules for Michigan's air permit program are found in the *Administrative Rules for Air Pollution Control* (Michigan Air Pollution Control Commission General Rules, M.A.C. R 336.1101 et seq.)

**Area Source:** Any small source of non-natural air pollution that is released over a small area but which cannot be classified as a point source. Such sources may include vehicles, fireplaces, woodstoves, and small fuel combustion engines.

**Attainment Area:** An area to be considered to have air quality as good as or better than the national ambient air quality standards as defined in the Clean Air Act. An area may be an attainment area for one pollutant and a nonattainment area for others.

**Best Available Control Technology (BACT):** An emission limitation based on the maximum degree of emission reduction which (considering energy, environmental, and economic impacts and other costs) is achievable through application processes and available methods, systems, and techniques. In no event does BACT permit emissions in excess of those allowed under any applicable Clean Air Act provisions. Use of BACT concept is allowable on a case by case basis from major new or modified emissions sources in attainment areas and applies to each regulated pollutant. BACT is also required for new or modified sources of VOCs under Rule 702.

**Code Of Federal Regulations (CFR):** A series of volumes where federal regulations have been codified (e.g., Title 40 = Protection of the Environment).

**Construction Waiver:** A waiver of the requirements of Rule 201 to begin construction of a source prior to receipt of an approved permit to install.

**Control Technique Guidelines (CTG):** A series of U.S. EPA documents designed to assist states in defining reasonable available control technology (RACT) for major sources of volatile organic compounds (VOC).

**Criteria Pollutants:** The 1970 amendments to the Clean Air Act required the U.S. EPA to set National Ambient Air Quality Standards for certain pollutants known to be hazardous to human health. U.S. EPA has identified and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, total suspended particulates, sulfur dioxide, lead, and nitrogen oxide.

**Cubic Feet Per Minute (CFM):** A measure of the volume of a substance flowing through air within a fixed period of time. With regard to indoor air, refers to the amount of air, in cubic feet, that is exchanged with indoor air in a minute's time, or an air exchange rate.

**Emission Factors:** The relationship between the amount of pollution produced and the amount of raw material processed. For example, an emission factor for a blast furnace making iron would be the number of pounds of particulates per ton of raw materials.

**Emission Inventory:** A listing, by source, of the amount of air pollutants discharged into the atmosphere from an individual source. There is also a state-wide emission inventory to help establish emission standards.

**Federal Register (FR):** A daily publication of the federal government that contains, among other things, proposed and final rules.

**Generally Available Control Technology (GACT):** Technology authorized as an alternative to MACT for area sources of hazardous air pollutants.

**Grandfathered Sources:** Under the Michigan permit to install program, existing sources of air contaminants installed before August 15, 1967 that are not required to apply for a permit to install unless the equipment or production processes are or have been modified.

**Hazardous Air Pollutants (HAPs):** Air pollutants that are not covered by ambient air quality standards but which, as defined in the Clean Air Act, may reasonably be expected to cause or contribute to irreversible illness or death. Such pollutants include asbestos, beryllium, mercury, benzene, coke oven emissions, radionuclides, vinyl chloride, and a list of 189 other air contaminants.

**Lowest Achievable Emission Rate (LAER):** Under the Clean Air Act and Michigan Rules, this is the rate of emissions that reflects (a) the most stringent emission limitation which is contained in the implementation plan of any state for such source unless the owner or operator of the proposed source demonstrates such limitations are not achievable; or (b) the most stringent emission limitation achieved in practice by the source's category. Application of this term does not permit a proposed new or modified source to emit pollutants in excess of existing new source performance standards.

**Major Modification:** A modification with respect to Prevention of Significant Deterioration and New Source Review under the Clean Air Act; refers to modifications to major stationary sources of emissions and provides significant pollutant increase levels below which a modification is not considered major.

**Major Offset Sources:** A stationary source that has a potential to emit of 100 or more tons of air contaminants per year or a particular change at a minor source that results in an increase in the potential to emit of 100 or more tons per year. This term is used for sources in nonattainment areas.

**Major Stationary Sources:** Term used to determine the applicability of Prevention of Significant Deterioration and new source regulations. In a nonattainment area in Michigan, any stationary pollutant source that has a potential to emit more than 100 tons per year is considered a major stationary source. In attainment areas the cutoff level may be either 100 or 250 tons, depending upon the type of source.

**Maximum Achievable Control Technology (MACT):** Emission limitations based on the best demonstrated control technology or practices in similar sources to be applied to major sources emitting one or more of the listed hazardous air pollutants.

**National Ambient Air Quality Standards (NAAQS):** Air quality standards established by the U.S. EPA that apply to outside air throughout the country. (See: criteria pollutants, state implementation plans)

**National Emissions Standards for Hazardous Air Pollutants (NESHAPs):** Emissions standards set by the U.S. EPA for air pollutants not covered by NAAQS that may cause an increase in deaths or in a serious illness. Primary standards are designed to protect human health, secondary standards to protect public welfare.

**New Source:** Any stationary source that is built or modified after publication of final or proposed regulations that prescribe a standard of performance which is intended to apply to that type of emission source.

**New Source Performance Standards (NSPS):** Uniform national U.S. EPA air emissions that limit the amount of pollution allowed from specific new sources or from existing sources that have been modified.

**Nonattainment Area:** Geographic area that does not meet one or more of the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act.

**Particulates:** Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air or emission.

**PM-10:** Particulate matter such as soot, dust, smoke, fumes, and mists that is 10 microns or smaller.

**PPM/PPB:** Parts per million/parts per billion, a way of expressing concentrations of pollutants in air, water, soil, human tissue, food, or other products.

**Permit To Install:** The basic nonrenewable Michigan air use permit for sources of air contaminants as specified in the *Administrative Rules for Air Pollution Control* (Michigan Air Pollution Control Commission General Rules, M.A.C. R 336.1201).

**Permit To Operate:** A Michigan air use permit beyond the permit to install. Currently, a source is required to apply for a Permit to Operate, as specified in the *Administrative Rules for Air Pollution Control* (Michigan Air Pollution Control Commission General Rules, M.A.C. R 336.1208).

**Pollution Prevention:** The use of materials, processes, or practices that reduce, minimize or eliminate the creation of pollutants or wastes. It includes practices that reduce the use of toxic or hazardous materials, energy, water, and/or other resources.

**Potential To Emit:** The rate of emission of an air contaminant of a process or process equipment while being operating at its maximum rated capacity. Certain physical or operational limits that are legally enforceable can decrease the potential to emit.

**Prevention Of Significant Deterioration:** A program used in development of permits for new or modified sources in an area that is already in attainment. The intent is to prevent an attainment area from becoming a nonattainment area.

**Reasonably Available Control Measures (RACM):** A broadly defined term referring to technologies and other measures that can be used to control pollution; includes Reasonably Available Control Technology and other measures. In the case of particulate matter (PM-10), it refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves, and open burning.

**Reasonably Available Control Technology (RACT):** The lowest emissions limit that a particular source is capable of meeting by the application of control technology that is both reasonably available, as well as technologically and economically feasible. RACT usually is applied to existing sources in nonattainment areas.

**Renewable Operating Permit:** A facility-wide permit mandated under the Clean Air Amendments of 1990 for major stationary sources, "affected sources," and sources defined by the U.S. EPA.

**Source:** The term is given a dual meaning. It can be an entire industrial facility that must aggregate emissions to meet the size cut-offs for application of the control and permit requirements. More commonly, however, the term "source" applies to each point at which emissions are released.

**State Implementation Plans (SIP):** U.S. EPA approved state plans for establishment, regulation, and enforcement of air pollution standards.

**Stationary Source:** A fixed, non-moving producer of pollution, mainly power plants, manufacturing facilities, refineries, and other facilities that emit air pollutants.

**Toxic Air Contaminant:** Any air contaminant for which there is no national ambient air quality standard and which is or may become harmful to public health or the environment when present in the outdoor atmosphere in sufficient quantities and duration.

**Volatile Organic Compound (VOC):** Any organic compound that participates in atmospheric photochemical reactions except for those designated by the U.S. EPA Administrator as having negligible photochemical reactivity.

Appendix A.  
AIR QUALITY DIVISION  
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
**APPLICATION INSTRUCTIONS**

**This form must be submitted to the Department in triplicate and any additional information required by these instructions, including any plans, specifications, or drawings, must be submitted in duplicate.**

An application is required to install, construct, reconstruct, relocate, alter, or modify any process or process equipment, including control equipment pertaining thereto, which may emit an air contaminant. A process is an action, operation, or a series of actions or operations at a source that emits or has the potential to emit an air contaminant. Process equipment is all equipment, devices, and auxiliary components, including air pollution control equipment, stacks, and other emission points, used in a process. Air pollution control equipment is any method, process, or equipment that removes, reduces, or renders less noxious air contaminants discharged into the atmosphere. One application may be submitted for one or more interrelated processes at a source. This application must be signed by an authorized company member to certify the truth of the information in the application.

An administratively complete application must include reasonable responses to all requests for information on this form and in these instructions. Additional detailed information may be attached to this form and must be submitted in duplicate. In addition to the general information requested on this form, the following information must be included for the application to be considered administratively complete:

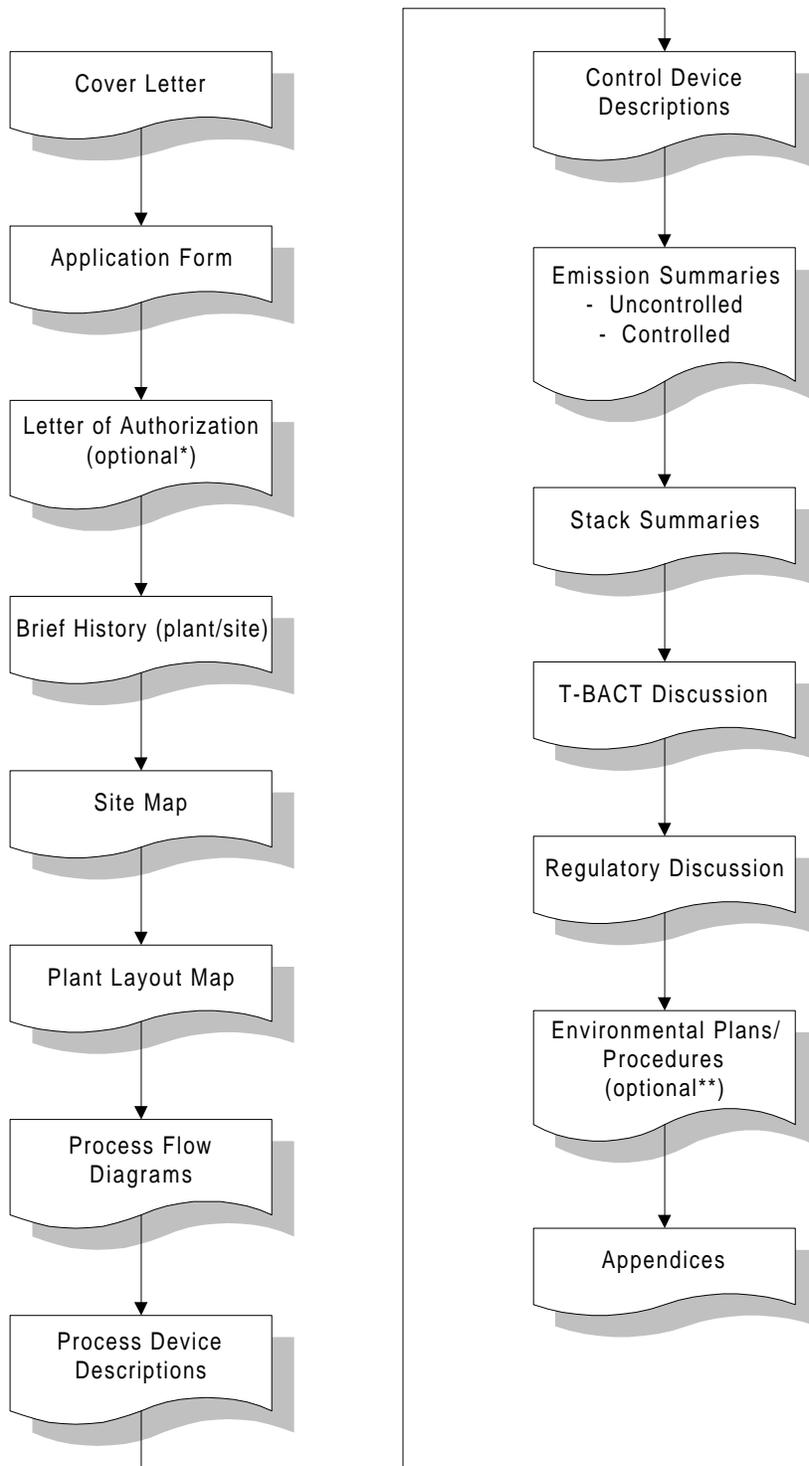
1. **Process Description** - In addition to the general process description included in item 5 on the front of this form, attach a complete written description of each process covered by this permit application. State the size and type along with the make and model (if known) of the proposed process equipment, including any air pollution control equipment. Specify the proposed operating schedule of the process equipment in hours per day, days per week, and weeks per year. Provide details of the type and feed rate of each material used in or produced by the process, in pounds per hour or similar measure. Provide sufficient control method detail to show the extent and efficiency of any air pollution control devices. For applications for complex or multiple processes, include a block diagram that shows the flow of materials, and intermediate and final products.
2. **Fuels and Firing Devices** - Indicate for gaseous fuels: type and cubic feet per hour; for fuel oil: grade and gallons per hour, sulfur content, and specify temperature to which oil is preheated; for solid fuels: type, ultimate analysis and pounds per hour. Indicate for firing devices: make, model, size, type, number of devices and capacity range of each device (from minimum to maximum).
3. **Site Description and Process Equipment Location Drawings** - Submit scale drawings which show a plan view of the owner's property to the boundary lines. Include outline and height of all structures and show any fence lines. Locate and identify the proposed equipment. Locate and identify all adjacent properties and all structures within 150 feet of proposed equipment showing outlines and heights. Locate and identify any stacks or other emission points related to the proposed process equipment and indicate the distance to the nearest property line. Indicate north direction on the drawing.
4. **Stack Parameters** - For each stack or vent related to the proposed process equipment provide the following information (including ranges if appropriate): the height above the ground, internal diameter or dimensions, discharge orientation (e.g. vertical, horizontal), exhaust volume flow rate in cubic feet per minute or similar units (indicate actual or standard), exhaust gas temperature, a description of any rain protection device and location of any stack testing ports.
5. **Regulatory Discussion** - Describe any federal, state, or local air pollution control regulations which you believe are applicable to the proposed process equipment. Include a discussion of how you believe the proposed process equipment complies with these regulations.
6. **Emission Calculations** - Explain clearly and in appropriate detail the nature, quantity (both controlled and uncontrolled), concentration, particle size, pressure, temperature, etc. of all air contaminants, including all toxic air contaminants, which may be discharged to the atmosphere.
7. **Toxic Air Contaminant Impacts** - Include information regarding the maximum ambient impact of all toxic air contaminants pursuant to Rule 230 (R 336.1230).

Additional information beyond that identified in these instructions may be required to complete the technical review of any individual application. Further information or clarification concerning permits to install can be obtained from the Permit Section, Air Quality Division, Michigan Department of Environmental Quality, PO Box 30260, Lansing MI 48909-7760, Phone: 517-373-7023. **Return completed application package to this address.**

**- Goldenrod copy to be retained by applicant -**

Appendix B.

### APPLICATION ASSEMBLY FLOWCHART



\* Only necessary for permits submitted by a consultant acting as the contact

\*\* A good idea to promote a good image and to help improve plant operations and ensure compliance