| DEQ | AIR QUALITY DIVISION POLICY AND PROCEDURE | | DEPARTMENT OF ENVIRONMENTAL QUALITY |
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| Original Effective Date: September 25, 1998<br>Revised Date: N/A<br>Reformatted Date: January 29, 2014 | Subject: Procedure for Processing Permit to Install Applications Subject to Federal Clean Air Act Section 112(g) | | Category:<br>☐ Internal/Administrative<br>☒ External/Non-Interpretive<br>☐ External/Interpretive |
| | Program Name: Permit to Install | | |
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*A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.*

**INTRODUCTION:**

The regulations implementing section 112(g) of the federal Clean Air Act (CAA) were adopted by reference in Rule 336.1299(2)(b) [Rule 299(2)(b)] and became effective on July 2, 1998. The 112(g) regulations are codified in 40 CFR §63.40 through §63.44 and are subsequently referenced herein. These regulations require that any constructed or reconstructed major source of hazardous air pollutants (HAPs) be equipped with Maximum Achievable Control Technology (MACT) to control HAP emissions. A major source of HAPs has emissions of a single HAP greater than or equal to 10 tons per year, or emissions of a combination of HAPs greater than or equal to 25 tons per year. The regulations do not apply to major sources of HAPs which are already subject to a MACT standard promulgated under section 112(d) or section 112(h) or a MACT determination made pursuant to section 112(j) of the federal CAA.

This policy and procedure document is designed to provide guidance on the submittal of a complete permit to install (PTI) application for applicants proposing facilities subject to the 112(g) requirements. It will also provide guidance to Air Quality Division (AQD) staff on how to evaluate such applications. Additionally, this policy and procedure document will replace Operational Memorandum (Op Memo) No. 15 Procedure for Processing Permit Applications Subject to Federal Clean Air Act Section 112(g). The attachments from Op Memo 15 have not been carried forward in this policy and procedure document as some are readily available on the AQD website. However, there were two attachments in Op Memo 15—Attachment C and Attachment D—which have been carried forward for reference purposes and to provide additional guidance.

Adherence to this guidance by both permit applicants and AQD staff is especially important because the federal regulations provide very specific timelines for review and approval of subject applications, and does not provide for extensions or variances. Additionally, as a federal pre-construction program, sources subject to these requirements are not eligible for a waiver, pursuant to Rule 336.1202 (Rule 202), to commence construction prior to approval of the PTI (ref. 40 CFR §63.43(c)(2)(ii)).

**AUTHORITY:**

The authority to implement the section 112(g) regulations of the federal CAA has been adopted by reference in Rule 299(2)(b) of the Michigan Air Pollution Control Rules which have been adopted pursuant to Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

**POLICY:**

The Michigan Department of Environmental Quality (MDEQ), AQD, will evaluate and act upon a permit application for a facility subject to Rule 299(2)(b) consistent with the provisions of the adopted regulations (40 CFR §63.40 through §63.44), and all other applicable provisions of the MDEQ's rules. A permit application submitted for a facility subject to Rule 299(2)(b) is considered to be an application for a MACT determination pursuant to §63.43(c)(2)(ii).

The section 112(g) regulations became effective on June 29, 1998. Any PTI application submitted on or after this date for construction or reconstruction of a major source of HAPs that is subject to these regulations, as described above, will be processed in accordance with this policy and procedure document.

**PROCEDURES:**

A facility that is subject to Rule 299(2)(b) will need to submit a PTI application pursuant to Rule 336.1201 (Rule 201). Due to the timing constraints outlined in the 112(g) regulations, it would be preferred that the application only cover the construction or reconstruction of a major HAP source. However, alteration or modification of other emissions units which may be occurring as a result of the proposed constructed or reconstructed major HAP source should also be included in the same application. Limiting the application to only the emission unit(s) subject to Rule 299(2)(b), and related emissions units, is desirable to avoid compromising the timing requirements of Section 112(g). It should be noted however that the PTI application should <u>not</u> cover plant wide applicability limits (PALs), pursuant to Rule 336.1415 (Rule 1415). PAL permits should be covered in a separate PTI application.

**Responsibility of AQD Permit Section Staff; Intent to Approve:**

| Who | Does What |
|---|---|
| Applicant | Submits a PTI application for the construction or reconstruction of a major HAP source pursuant to Rule 299(2)(b). |
| AQD Permit Screener | Screen the PTI application for administrative completeness and forward to appropriate unit supervisor for assignment. |
| AQD Unit Supervisor | Review and assign to permit engineer. Make note if waiver request accompanies the application, and if so, have permit engineer contact appropriate district staff. If source is subject to Rule 299(2)(b), a construction waiver is not permitted. |
| Permit Engineer | Review the application for new source review (NSR) technical completeness within 30 calendar days after receipt of the application. |
| Permit Engineer | Notify applicant if the MACT determination is complete within 45 days after receipt of the application. This step is required pursuant to Rule 299(2)(b).<br>o The NSR technical completeness review and the MACT determination completeness review should be done concurrently. |
| Permit Engineer | If the application is incomplete, request(s) for additional information will be handled pursuant to standard AQD procedures. |
| Permit Engineer | • If the application is approvable, notify the applicant, in writing, of the intent to approve the application. This is considered an initial approval pursuant to 40 CFR §63.43(f)(2).<br>• This notification must occur within 30 calendar days after the applicant has been notified in writing that the application is complete. |
| Permit Engineer | The application will be announced for public comment following department procedures, and in accordance with Rule 336.1205 (Rule 205) and Section 5511 of Act 451[MCL §324.5511]. |
| Permit Engineer | The remainder of the permitting process will follow standard procedures. The United States Environmental Protection Agency (EPA), Region V, must be copied on all notices and correspondence, including the final permit approval. |

**Responsibility of AQD Permit Section Staff; Intent to Not Approve:**

| Who | Does What |
|---|---|
| Applicant | Submits a PTI application for the construction or reconstruction of a major HAP source pursuant to Rule 299(2)(b). |
| AQD Permit Screener | Screen the PTI application for administrative completeness and forward to appropriate unit supervisor for assignment. |
| AQD Unit Supervisor | Review and assign to permit engineer. Make note if waiver request accompanies the application, and if so, have permit engineer contact appropriate district staff. If source is subject to Rule 299(2)(b), a construction waiver is not permitted. |
| Permit Engineer | Review the application for NSR technical completeness within 30 calendar days after receipt of the application. |
| Permit Engineer | Notify applicant if the MACT determination is complete within 45 days after receipt of the application. This is required pursuant to Rule 299(2)(b).<br>o The NSR technical completeness review and the MACT determination completeness review should be done concurrently. |
| Permit Engineer | If the application is incomplete, request(s) for additional information will be handled pursuant to standard AQD procedures. |
| Permit Engineer | • If the application is **not** approvable, notify the applicant, in writing, of the intent to deny the application. This is considered an intent to disapprove pursuant to 40 CFR §63.43(f)(2).<br>o This notification will clearly state the reasons why the MACT determination is not approvable, and will give the applicant 60 calendar days after receipt of the notice to provide additional information.<br>• The notification will be sent by certified mail, receipt requested.<br>• The notification must occur within 30 calendar days after the applicant has been notified in writing that the application is complete. |
| Permit Engineer | • Pursuant to Section 5510 of Act 451 [MCL §324.5510], the opportunity for public comment is required on proposed denial actions.<br>• The notice of intent to deny the application will include notice of a public comment period and opportunity for hearing if requested. This is necessary to meet the timelines specified in 40 CFR §63.43(f)(4) as closely as possible while also meeting the requirements of Section 5510.<br>• The public comment period will commence on the date written notification of the intent to deny the 112(g) MACT determination is sent to the applicant. |
| Applicant | Does not provide a response, or the information provided is insufficient to make the application approvable within the 60 day period, the decision maker shall deny the application, without prejudice, within 90 days after the initial notice of intent to disapprove, or within 30 days after the additional information is received, whichever is earlier. |
| Applicant | Provides additional information within the required 60 day time period. This information makes the application approvable. |
| Permit Engineer | Proceed with a notification of intent to approve. |

| Who | Does What |
|---|---|
| Permit Engineer | Proceed with public notice procedures. |

**APPENDICES:**

Appendix A—MACT Information Checklist
Appendix B—Determination of Maximum Achievable Control Technology (MACT)

DIVISION CHIEF APPROVAL:

G. Vinson Hellwig, Chief
Air Quality Division

**Appendix A**
**MACT Information Checklist**

This checklist is provided for your convenience. Please complete and submit with your permit to install (PTI) application (form EQP 5615) to facilitate review of your application.

The following information is required for a PTI application for a facility subject to Rule 299(2)(b). This information is required in addition to the information requested in the PTI application and in Rule 203 and must be submitted in duplicate. Failure to provide this information will result in an administratively incomplete application. Rule 299(2)(b) adopts by reference the regulation implementing Section 112(g) of the federal Clean Air Act (CAA). These regulations are codified as 40 CFR Sections 63.40 through 63.44. The regulations require that any constructed or reconstructed major source of hazardous air pollutants (HAPs) be equipped with Maximum Achievable Control Technology (MACT) to control HAP emissions. A major source emits or has the potential to emit 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs.

Additional information can be obtained from the Internet, or by calling (517) 284-6793. The Air Quality Home Page is located at *http://www.deq.state.mi.us/aqd.*

| DOES THE APPLICATION INCLUDE THE FOLLOWING? | | |
|---|---|---|
| 1. A DETAILED PROCESS DESCRIPTION OF THE PROPOSED PROJECT INCLUDING ALL EMISSION POINTS | ☐ YES | ☐ NO |
| 2. COMPLETE DESCRIPTIONS OF ALL INDIVIDUAL EMISSION UNITS AND AIR POLLUTION CONTROL EQUIPMENT AFFECTED BY THE PROPOSED PROJECT | ☐ YES | ☐ NO |
| 3. A PROCESS FLOW DIAGRAM THAT SHOWS ALL EMISSION UNITS AND AIR POLLUTION CONTROL EQUIPMENT, AND THE RELATIONSHIP AND CONNECTIONS BETWEEN THESE ITEMS AT THE SOURCE, IF THESE RELATIONSHIPS ARE ALTERED BY THE PROPOSED PROJECT | ☐ YES | ☐ NO |
| 4. A DESCRIPTION OF ANY LISTED SOURCE CATEGORIES IN WHICH THE MAJOR SOURCE IS INCLUDED | ☐ YES | ☐ NO |
| 5. A DESCRIPTION OF ANY FEDERALLY ENFORCEABLE EMISSION LIMITS APPLICABLE TO THE SOURCE | ☐ YES | ☐ NO |
| 6. a) THE EXPECTED COMMENCEMENT DATE FOR CONSTRUCTION/RECONSTRUCTION OF THE MAJOR SOURCE | ☐ YES | ☐ NO |
| b) THE EXPECTED COMPLETION DATE FOR CONSTRUCTION/RECONSTRUCTION OF THE MAJOR SOURCE | ☐ YES | ☐ NO |
| c) THE ANTICIPATED DATE OF START UP OF THE MAJOR SOURCE | ☐ YES | ☐ NO |
| 7. A HAZARDOUS AIR POLLUTANT (HAP) EMISSION SUMMARY, SUMMARIZING ESTIMATED EMISSIONS OF EACH HAP FOR THE PROPOSED PROJECT AS FOLLOWS:<br>a) UNCONTROLLED EMISSION RATES AT EXPECTED AND MAXIMUM CAPACITY OF THE SOURCE<br>b) CONTROLLED EMISSIONS, IN TONS PER YEAR, AT EXPECTED AND MAXIMUM CAPACITY OF THE SOURCE | ☐ YES | ☐ NO |
| 8. A RECOMMENDED EMISSION LIMITATION FOR THE SOURCE AND METHOD USED TO DETERMINE COMPLIANCE | ☐ YES | ☐ NO |
| 9. THE PROPOSED MACT FOR THE SOURCE (MACT CANDIDATE):<br>a) DOCUMENTATION IF EXISTING CONTROL TECHNOLOGY IN OPERATION WILL BE USED TO MEET THE RECOMMENDED EMISSION LIMITATION FOR THE SOURCE, <u>OR</u> | ☐ YES | ☐ NO |
| b) A SELECTED CONTROL TECHNOLOGY TO MEET THE RECOMMENDED EMISSION LIMITATION INCLUDING TECHNICAL INFORMATION ON THE DESIGN, OPERATION, SIZE, AND ESTIMATED CONTROL EFFICIENCY | ☐ YES | ☐ NO |
| 10. SUPPORT DOCUMENTATION INCLUDING IDENTIFICATION OF ALTERNATIVE CONTROL TECHNOLOGIES CONSIDERED TO MEET THE EMISSION LIMITATION, AND AN ANALYSIS OF COST, NON-AIR QUALITY HEALTH AND ENVIRONMENTAL IMPACTS, AND ENERGY REQUIREMENTS ASSOCIATED WITH THE EXPECTED EMISSION REDUCTIONS | ☐ YES | ☐ NO |
| 11. CONFIDENTIAL INFORMATION | ☐ YES | ☐ NO |
| IF YES, HAS SUCH INFORMATION BEEN PROPERLY MARKED AND CLAIMED, AND COPIES OF THE APPLICATION SUITABLE FOR PUBLIC INSPECTION BEEN SUBMITTED, IN ACCORDANCE WITH ACT 451 SECTION 5516(3)? | ☐ YES | ☐ NO |
| 12. HAS THE APPLICANT RETAINED A COPY OF THIS APPLICATION AT THE SOURCE? | ☐ YES | ☐ NO |

## Appendix B
## Determination of Maximum Achievable Control Technology (MACT)

This document discusses the determination of Maximum Achievable Control Technology (MACT) as required under 40 CFR §63.40 through §63.44, also known as the Section 112(g) regulations. These regulations outline specific requirements for making a MACT determination. In addition, the Michigan Department of Environmental Quality, Air Quality Division (AQD), offers the following guidelines to assist a permit applicant in preparation of its analysis.

MACT is defined in §63.41 as "the emission limitation which is not less stringent that the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the permitting authority, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed or reconstructed major source." It should be understood that this is the definition of MACT for "new" sources, or in the case of Section 112(g) definitions, "constructed or reconstructed major sources." This definition and this document should not be applied to existing, altered or modified sources.

I. General Requirements of Section 112(g)

A. The analysis must be emission unit specific with respect to the HAPS emitted.

B. The analysis must evaluate the entire range of demonstrated options, including alternatives that may be transferable from a similar source. Demonstrated options are those identified from the 'available information' defined in 40 CFR §63.41.

C. The level of detail in the control options analysis should vary with the relative magnitude of the emissions and the emissions reduction achievable.

D. The MACT emission limit(s) should be expressed on a mass per unit time basis (based on maximum capacity) and in terms of process unit variables. The mass per unit time limitation should use parameters and an averaging time appropriate to the process. The process unit variable limitation should use parameters such as (but not limited to) material processed, fuel consumed or pollutant concentration (e.g., lbs/$10^6$ BTU, lbs/gal of solids applied, g/dscm).

E. Emission limits and work practice standards must be federally enforceable. Permit conditions should specify appropriate stack testing, continuous emission monitoring, continuous process monitoring, recordkeeping, and any other parameters necessary to make the emission limitations federally enforceable. All monitoring shall be capable of demonstrating continuous compliance during the proposed averaging time(s) and reporting period(s). Although Section 112(g)-specific compliance monitoring guidance has not yet been developed, the federal Compliance Assurance Monitoring (CAM) regulations [40 CFR Part 64] and the periodic monitoring requirements of the federal Title V regulations [40 CFR Part 70] can be used as the basis for meeting the requirements of 40 CFR §63.43(g) and §63.43(l).

II. Specific Procedure (step-by-step)

A. Pollutant Applicability
MACT applies to the proposed source emitting HAPS, and considering all HAP emissions. While it is not required that each HAP emitted be considered independently, it is expected that different forms of emissions will be considered separately. For example, a proposed source that will emit both particulate HAPs and gaseous HAPs is expected to consider both particulate and gaseous emissions controls as part of the MACT determination.

B. Emission Unit Applicability
Determine all potential emission units and emission points, including fugitive units. Examples of emission points include each stack, relief valve, pump, storage pile or tank, conveyor, and valve.

C. Potentially Sensitive Concerns
Identify any potentially sensitive concerns involving energy, economic, and public health and environmental issues. All potentially sensitive air quality concerns, including the control of non-targeted pollutants, should be addressed. For example, limestone may have to be injected upstream of a baghouse to control hydrogen chloride even though arsenic compounds is the regulated hazardous air pollutant of concern in the analysis.

D. Initial Selection of MACT Control Technologies
1. Identify all alternative control strategies including (a) transferable and innovative control technologies, (b) process changes or alternative processes that inherently produce less pollution, and (c) various configurations of same technology which achieve different control efficiencies. All of the following sources of information should be investigated to ensure that all possible control strategies are identified:
   a) A relevant proposed regulation, including all supporting information.
   b) Background information documents for a draft or proposed regulation.
   c) Data and information available from the United States Environmental Protection Agency's (EPA's) Control Technology Center developed pursuant to Section 112 of the federal Clean Air Act.
   d) Data and information contained in EPA's Aerometric Informational Retrieval System (AIRS), including information in the MACT database.
   e) Per §63.41, definition of "available information", the following information that is considered by the AQD to be available:
      i. EPA's RACT/BACT/LAER Information Clearinghouse.
      ii. Literature.
      iii. Industrial surveys.
      iv. EPA/State/Local air pollution control agency surveys.
2. Rank all possible control technology alternatives in descending order based on overall control efficiency.

E. Selection of MACT final control strategy

MACT cannot be less stringent than the emission control which is achieved in practice by the best controlled similar source. MACT must also be the most efficient alternative which is not demonstrated to be infeasible. Normally the most efficient or stringent alternative should be chosen. If the most efficient alternative is not feasible because of energy, economic, or public health and environmental impacts or other costs, then continue evaluating the less efficient technologies. The following are examples when energy, economic, or environmental impacts may make an alternative not feasible.

a) Energy: Natural gas for operating an afterburner is not available based on local regulations.

b) Economic:

i. The increased cost of the final product (e.g., automobile, cement, coke, etc.) would increase to a level that the project would no longer be feasible. This demonstration requires that the facility submit financial information to verify this claim.

ii. The increased and/or incremental cost is out of proportion to the environmental benefit. (e.g., The increased cost of going from 93% control to 94% control increases the capital cost from $2,000,000 to $4,000,000 and the operating costs from $500,000/year to $1,000,000/year and only reduces the emissions of nitrogen oxides by 50 tons per year.)

c) Environmental: A wet scrubber may create a by-product which cannot be disposed of without creating a more detrimental impact.

F. Establishment of MACT emission limit(s)

The MACT emission limits should be established with a reasonable margin of safety (e.g., 95% confidence level of available test data); and should be based on an appropriate averaging time. Additional requirements such as stack testing, continuous emission monitoring, recordkeeping, and reporting requirements that serve to make the emission limitation enforceable as a practical matter should also be established.

G. Alternative requirements

Specific design, equipment, work practice or operational standards may be proposed in lieu of control technology if it can be demonstrated to the satisfaction of the AQD that it is not feasible to establish or enforce an emission limitation. Establishment of alternative requirements is only applicable to fugitive and other sources where it is not practical to collect and control the emissions using standard methods.