

## **APPENDIX E**

### **REGULATIONS GOVERNING CONSTRUCTION AND RECONSTRUCTION OF MAJOR HAP SOURCES**

**40 CFR 63 Subpart B §63.40 through §63.44**

**(a.k.a., Modifications Rule)**

**CAA SECTION 112(g)**



## REGULATION STATUS

The final rule was promulgated on 27 Dec 96 ([61 FR 68384](#)). The requirements of the final rule carry out §112(g)(2)(B) of the 1990 Clean Air Act Amendments.

Subsequent corrections and amendments are reflected in latest version of the Code of Federal Regulations, Volume 40, Part 63, Subpart B §§63.40-63.44.

## RULE SUMMARY

Congress developed §112(g) to prevent the construction or reconstruction of new uncontrolled major HAP sources prior to issuance of a NESHAP. This is essentially a New Source Review Program for HAPs that requires that MACT be determined and installed on new and reconstructed major HAP sources.

The final rule bears little resemblance to the original proposed rule issued 01 Apr 94 (59 FR 15510). The proposed rule affected constructed, reconstructed, and “modified” major HAP sources. The final rule **does not** affect “modified” major HAP sources. EPA decided to implement only the construction and reconstruction provisions of §112(g)(2)(B). This decision was made for several reasons:

1. EPA intends to issue the remaining NESHAPs by their respective deadlines.
2. The proposed provisions for modified sources were complex and controversial and would likely be tied up in litigation for years. The proposal involved a complex hazard ranking system, offset requirements, and controversial HAP de minimus values that would trigger applicability.
3. EPA assumes that existing State air toxic programs contain procedures that will capture the most significant modifications.

EPA may consider issuing provisions affecting “modifications” in the future, if they fall substantially behind schedule in finalizing the NESHAPs.

Although the final rule is very similar to the revised draft rule published on 26 Mar 96 (61 FR 13125), there were some significant changes that affect the applicability of the rule. Two of the changes that are worthy of note involve the phrase “process or production unit” and its use in the definitions of “construct a major source” and “reconstruct a major source”.

### Applicability

The final rule affects constructed and reconstructed major sources of HAPs which are not subject to a NESHAP or other relevant standard or exemption under 40 CFR 63.

These provisions potentially apply to:

1. construction of **entire new facilities**, and
2. construction of **new process or production units** at existing facilities, and
3. reconstruction of **existing process or production units** at existing facilities.

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To be affected by this rule, the sources undergoing construction or reconstruction must emit major source quantities of HAPs; 10 tons per year (tpy) of a single HAP or 25 tpy of any combination of HAPs. If you want to construct or reconstruct a major HAP source (or sources) you must determine MACT, obtain a "Notice of MACT Approval" (or comparable approval from the permitting authority) and install MACT at the time of construction or reconstruction.

There are several exceptions to the applicability of this rule. The following sources are exempt:

- Electric Utility Steam Generating Units
- Stationary Sources in Deleted NESHAP Source Categories
- Research and Development Activities

These requirements become effective in your State:

1. After your State has an approved Title V Permit Program in place, and
2. On the effective date of the program that the permitting authority adopts to implement this rule. Permitting authorities must adopt a program to implement this rule which has an effective date no later than 27 Jun 98. The rule also contains guidance on what must be done if a permitting authority fails to adopt a program.

The EPA changed the definition of "process or production unit" to require the unit to produce an intermediate or final product. The definition also specifies that the process or production unit may be "*part of a facility.*" By requiring that the unit produce a product, the EPA intends these provisions to apply to units which are discrete, not units which are just one essential part of a larger function.

In applying these definitions construction and reconstruction project at a facility, the following questions must be answered:

- *What are the intermediate or final products?*
- *Does the new equipment and/or structures constitute a collection of equipment and/or structures that produces such a product?*

The extent to which the new equipment is discrete, and can produce an intermediate or final product independently from the existing equipment, will dictate whether or not a §112(g) review is required.

EPA provided three examples to help illustrate this discussion:

Example 1. At a plant which manufactures fiberglass reinforced plastic boats, the owners wish to add more spray guns to an existing fabrication line to supplement the existing spray guns in laminating a particular model of boat hulls. The new spray guns will have a PTE greater than 10 tons/year of a HAP.

In this example, EPA views the fiberglass hull of a boat as an intermediate product in the manufacture of the final product (i.e., the boat with deck, trim, paint, engine,

etc.) The collection of structures and/or equipment needed to manufacture the intermediate product, in this case, includes the existing spray guns and other operations in the building (e.g., the lamination operation and other supporting equipment) that typically are found in the production of boats. ***Because the newly added spray guns in and of themselves do not produce the intermediate product,*** the EPA does not view the additional spray guns for lamination as a process or production unit that is subject to a §112(g) review.

Example 2. Using Example 1, assume that the owner adds more spray guns to laminate a second model of boat hulls. The room is large enough to accommodate two lamination processes at the same time. The new spray guns have a PTE greater than 10 TPY.

The same rationale used in Example 1 applies here. The collection of equipment needed to produce the boat hull includes the lamination process as well as the gel coat process. ***Because the addition of the second lamination process does not produce an intermediate product,*** if no additional laminating or other essential equipment were added, it would not be subject to a §112(g) review.

Example 3. Using Example 2, a gel coat spray booth and supporting equipment needed to manufacture the boat hulls are added in addition to the spray guns.

The process or production unit in this example is the set of equipment that consists of the gel coat spray booths, the spray gun, and the supporting equipment. ***This new set of equipment can reasonably operate alone and produce an intermediate product.*** Consequently, all sources of HAP in this set of equipment, which includes the gel coat spray booth and the spray guns in the laminating room, are subject to review under section 112(g).

### Key Definitions

The following definitions are essential to understanding the applicability of the rule and the discussion in this appendix. Section 63.41 in the final rule contains additional definitions.

*Affected source* means the stationary source or group of stationary sources which, when fabricated (on site), erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in this subsection.

*Construct a major source* means

- (1) To fabricate, erect, or install at any ***greenfield site*** a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year of any HAP's or 25 tons per year of any combination of HAP, or
- (2) To fabricate, erect, or install at any developed site a new ***process or production unit*** which ***in and of itself*** emits or has the potential to emit 10

tons per year of any HAP or 25 tons per year of any combination of HAP, **unless** the process or production unit satisfies criteria i through vi of this paragraph:

- (i) All HAP emitted by the process or production unit that would otherwise be controlled under the requirements of this subpart will be controlled by emission control equipment which was previously installed at the same site as the process or production unit;
- (ii)
  - (A) The permitting authority has determined within a period of 5 years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT), lowest achievable emission rate (LAER) under 40 CFR part 51 or 52, toxics-best available control technology (T-BACT), or MACT based on State air toxic rules for the category of pollutants which includes those HAP to be emitted by the process or production unit; or
  - (B) The permitting authority determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT, LAER, T-BACT, or State air toxic rule MACT determination);
- (iii) The permitting authority determines that the percent control efficiency for emissions of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;
- (iv) The permitting authority has provided notice and an opportunity for public comment concerning its determination that criteria in paragraphs (2)(i), (2)(ii), and (2)(iii) of this definition apply and concerning the continued adequacy of any prior LAER, BACT, T-BACT, or State air toxic rule MACT determination;
- (v) If any commenter has asserted that a prior LAER, BACT, T-BACT, or State air toxic rule MACT determination is no longer adequate, the permitting authority has determined that the level of control required by that prior determination remains adequate; and
- (vi) Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the permitting authority are predicated will be construed by the permitting authority as applicable requirements under section 504(a) and either have been incorporated into any existing title V permit for the affected facility or will be incorporated into such permit upon issuance.

*Green-field site* means a contiguous area under common control that is an undeveloped site.

*Process or production unit* means any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

*Reconstruct a major source* means the replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, whenever:

1. the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and
2. it is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under this subpart.

## Standards

### *Step 1. Determine MACT*

A case-by-case “MACT determination” must be made when planning to construct or reconstruct affected major HAP sources. Owners of affected sources must determine MACT for the source category on a case-by-case basis. Although the final rule continues to require the source owner to perform the MACT analysis, EPA **eliminated** the requirement for a responsible official to “certify” that the control technology meets the requirements of §112(g). Consequently, the burden of proof for the MACT Determination rests with the permitting authority.

Section 63.43(d) describes the principles to use in the MACT determination process. The principles of MACT Determination are summarized as follows.

The MACT determination must be based on “available information” and:

- Shall not be less stringent than best controlled similar source.
- Shall achieve the maximum degree of reduction in emissions of HAP considering the costs of achieving such reductions, non-air quality health and environmental impacts and energy requirements.
- May contain specific design, work practice, and/or operational standards if an emission limitation cannot be established.
- If available, shall be based on or at least consider a presumptive MACT determination or a proposed emission standard for the source category.

Subsequent review by (and any actions taken by) the permitting authority must also abide by these principles.

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### *Step 2. Apply for Approval of the MACT Determination*

The next step is to submit what the owner or operator thinks MACT should be to the permitting authority for approval using one of the following review options.

The application for a MACT Determination must be submitted and approved through the appropriate administrative review procedures before construction or reconstruction can begin. Prepare the application that includes the information specified in §63.43(e) and shown in the following Application Guide.

### APPLICATION GUIDE

#### **Application Requirements for a §112(g) Case-By-Case MACT Determination Required by 40 CFR 63 Subpart B §63.43(e)**

Applications are required for sources planned for construction or reconstruction that are subject to a §112(g) review under 40 CFR 63 Subpart B §63.40 through 63.44. Depending on the review option chosen in §63.43(c) you must submit an “*Application for a MACT Determination*” using the Title V permit process, or an “*Application for a Notice of MACT Approval*” using the procedures outlined in §63.43(f) through §63.43(h), or “*Application for a MACT Determination*” using any other procedures specified by the permitting authority that allow for public review.

Regardless of the review option, all applications must include:

- MACT as determined by the owner or operator using to the principles contained in §63.43(d);
- Name and address of the major source to be constructed or reconstructed;
- Brief description of the major source to be constructed or reconstructed and identification of any listed source category or categories in which it is included;
- Expected commencement date of construction or reconstruction;
- Expected completion date;
- Anticipated date of start-up;
- HAP emitted by the source, and the estimated emission rate for each HAP, to the extent this information is needed by the permitting authority to determine MACT;
- Applicable federally enforceable emission limitations;
- The maximum and expected utilization of capacity of the affected source, and the associated uncontrolled emission rates for that source, to the extent this information is needed by the permitting authority to determine MACT;
- The controlled emissions for the constructed or reconstructed major source in tons/yr at expected and maximum utilization of capacity, to the extent this information is needed by the permitting authority to determine MACT;
- A recommended emission limitation for the constructed or reconstructed major source;



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### APPLICATION GUIDE

If the affected sources require additional control technology or a change in control technology to comply with the MACT determination, the application must also contain the following:

- The selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, estimated control efficiency of the control technology (and the manufacturer's name, address, telephone number, and relevant specifications and drawings, if requested by the permitting authority);
- Supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology; and
- Any other relevant information required per the General Provisions.

If the affected sources do not require additional control technology or a change in control technology to comply with the MACT determination, the application must also contain the following:

- Documentation of the control technology in place.

Submit the application to the permitting authority for approval using one of the following review options.

- If a Part 70 or Part 71 permit or permit revision is required before construction or reconstruction or if you elect to use the Part 70 or Part 71 permit process, then the administrative review for the MACT determination shall occur upon obtaining or revising the permit according to Title V administrative procedures, or
- If a Part 70 or Part 71 permit is not required before construction or reconstruction then you may:
  - 1 either apply for a "Notice of MACT Approval" using the procedures contained in §63.43(f) through §63.43(h) of Subpart B, or
  - 2 submit the application for approval using any administrative procedures established in State or local jurisdiction that allows for public participation.

Note: When applying for a permit pursuant to Title V, you may request alternate operating scenarios in the event application of a control technology is not feasible. This means that you can limit your emissions by only operating for a limited amount of time.

#### *Step 3. Receive Approval of the MACT Determination*

At the end of the review process, EPA will hopefully issue a Notice of MACT Approval which will contain emission limitations or work practice requirements to control HAP. This notice will also specify applicable notification, operation, maintenance, performance testing, monitoring, reporting and recordkeeping

requirements. The Notice of MACT Approval will expire 18 months after issuance therefore you must begin construction or reconstruction before the Notice expires. EPA allows permitting authorities to grant a 12 month extension to the expiration date. **All provisions in Notice of MACT Approval are Federally Enforceable.**

The effective date of the Notice of MACT Approval will be one of the following:

- The date the Notice of MACT Approval becomes final, or
- The date of issuance of a Title V permit incorporating a MACT determination, or
- The date specified in any other notice of MACT approval issued by the permitting authority.

### Compliance Deadlines

Affected constructed and reconstructed sources must comply upon start-up with the provisions of the Notice of MACT Approval.

#### *NESHAP Standards Promulgated After §112(g) Review Begins*

The final rule specifies how subsequently promulgated NESHAPs affect constructed and reconstructed sources that have either gone through or are still undergoing a §112(g) review process.

**Q.** What happens when EPA promulgates a "new CAA §112 standard" that applies to the source **before** issuance of a final and legally effective Notice of MACT Approval? *[Note: A "new CAA §112 standard" could be a NESHAP requirement promulgated per §112(d) (MACT standard) or §112(h) (work practice standard) or a State MACT Determination resulting from the §112(j) permit hammer provisions contained in 40 CFR 63 Subpart B §63.50 through §63.56.]*

**A.** The §112(g) process ends and the source must comply with the new standard.

**Q.** What happens when EPA promulgates a "new CAA §112 standard" that applies to the source **after** issuance of a final and legally effective Notice of MACT Approval?

**A.** The source must initially comply with the requirements of the §112(g) Notice of MACT Approval. The source will be required to comply with the new standard by an extended compliance date. EPA may specify the extended compliance date in the new standard. If not, the permitting authority must establish a compliance date for the source. The compliance date must be set so that compliance is achieved as expeditiously as practicable but no later than 8 years after the new standard is promulgated. *[Note: If the Notice of MACT Approval is more stringent than the new standard, it is up to the permitting authority as to which standard the source must comply with in the long run.]*

### SUBSEQUENT REGULATORY ACTIVITY

None.

## **MILITARY SOURCES**

The construction or reconstruction of any source that has the potential to emit major source quantities of HAP is subject to this rule if a NESHAP has not yet been issued by EPA. However, this is not expected to be a common occurrence on military installations.

A possible project that could be affected would be the construction or reconstruction of sources that will be covered by the future Miscellaneous Metal Parts and Products (Surface Coatings) NESHAP and the Paint Stripping Operations NESHAP which will be issued between the years 2000 and 2002. For example, in order for the Army to build a new tactical vehicle coating facility (one that would potentially emit 10 tons per year of a HAP), the project would have to go through the §112(g) review process.

## **COMPLIANCE COST**

The cost to prepare a MACT determination will vary depending on the amount of information that has already been developed by EPA for the relevant source category. If EPA is in the process of developing a NESHAP that will eventually cover the constructed or reconstructed sources, the cost will be less than if EPA has not yet begun the development process. The Navy estimates the cost as follows.

Information Available*	MACT Determination Cost
None	\$50,000
Presumptive MACT	\$25,000
Proposed NESHAP	\$10,000
*Amount of regulatory information that will be available from EPA about the source to be constructed or reconstructed.	

## **CONTACTS**

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