

# Chapter 3: Major Permit Amendment

## Table of Contents

3.1 Overview .....	2
3.1.1. Description: Defining the Change.....	3
3.1.2. Changes that trigger a major permit amendment.....	4
3.2 Title I modifications .....	4
3.2.1. New Source Review/Prevention of Significant Deterioration .....	5
3.2.2. NSPS Applicability .....	12
3.2.3. Part 61 NESHAPs Applicability .....	18
3.2.4. Part 63 NESHAPs Applicability .....	22
3.3 Other Changes Triggering a Major Permit Amendment.....	26
3.3.1. Significant Changes to Monitoring, Reporting or Record Keeping Requirements .....	26
3.3.2. Source-Specific Permit Conditions .....	27
3.4 Case-by-Case Limits to Avoid Applicability .....	28
3.4.1. Establish or amend permit terms/conditions for which there is no underlying applicable requirement .....	28
3.5 New Options Under NSR Reform .....	30
3.5.1. Clean Unit Designation .....	31
3.5.2. Pollution Control Projects.....	40
3.5.3. PALS (Plantwide Applicability Limits) .....	46

# Chapter 3

## Major Permit Amendment

### 3.1 Overview

A major permit amendment has the most extensive and time-consuming application process of all the permit amendments. Because there are so many actions that can potentially trigger the need for such a permit amendment, it is critical that major sources work through a detailed and systematic checklist to be sure that none of the potential triggers are missed.

The **Permit Change Forms (Series CH-xx)** are designed to be such a checklist. For all proposed changes, going through the permit forms in sequence is the most thorough and certain way to determine if a major permit amendment is required. Form CH-02 guides you through the steps to determine if a permit amendment is required, and if so, what type and which forms must be submitted. This process will automatically provide most of the information required to allow processing of the subsequent permit amendment by MPCA, and the information will be on forms that make processing the permit much quicker and more certain. As another option, the flowcharts (Figures 1-1 through 1-5 in Chapter 1) provide a guide through the process with references to the Permit Change Forms.

If you determine at some point that a major permit amendment is not required, the forms will guide you to the type of permit amendment that may otherwise be required and will fully document the determination that a more complex type of permit amendment is not required. If you determine that no permit amendment of any kind is required, the forms will document this determination as well.

Form CH-ML-01 is the master list of forms that may be needed to complete all permit amendment applications. While not all forms are needed for each application, Form CH-ML-01 lists all of the forms and provides the general instructions for preparing an application for a permit amendment.



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PERMIT CHANGE FORM **CH-ML-01**  
**AMENDMENT APPLICATION**  
**FORMS MASTER LIST AND**  
**GENERAL INSTRUCTIONS**

03/31/04

The following is a list of air emission permit application forms to use for making changes or modifications to a facility. Form CH02 guides you through the process of determining if a notification, amendment or total facility permit is required to make a change at your facility. Forms are available on the MPCA web page at [www.pca.state.mn.us/air/permits/forms.html](http://www.pca.state.mn.us/air/permits/forms.html) or from the MPCA Customer Assistance Center at (651) 297-2274 or (800) 646-6247 (within Minnesota only).

### 3.1.1. Description: Defining the Change

The project or change being proposed needs to be described so that a person who is not familiar with the source or emission units in question can understand the change and its regulatory implications. Use **Form CH-01 Change Description** to clearly describe the change in text.



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PERMIT CHANGE FORM **CH-01**  
**CHANGE DESCRIPTION**  
(FORMERLY MOD-01 MODIFICATION DESCRIPTION)  
03/31/04

While designed to show changes to an emission unit(s) or a new entire source, Form CH-01 can also be used to designate changes to existing permit language, which may also require a major permit amendment.

It may be useful in describing changes to your facility to use additional forms such as:

- **GI-02 Process Flow Diagram**
- **GI-03 Facility and Stack/Vent Diagram**
- **GI-04 Stack/Vent Information**
- **GI-05A – GI-05D Equipment Information Forms**

Attaching copies of these forms from the most recent permit application (or the Title V application) and highlighting those emission units or other features that have changed may illustrate more clearly what has changed and the relationship of the change to other emission units and equipment. If new equipment is proposed, completion of these additional forms is required.

Determining regulatory applicability hinges primarily on the changes to emissions at the emission unit or source that will undergo the change. Thus, it is critical that calculations of emission changes be done correctly and documented thoroughly, as discussed in Chapter 2. Some sources find it helpful to use **Form GI-07 Facility Emissions Summary** to summarize emission changes; others use spreadsheets

which show the same information. As a source moves through the applicability determinations below, emission calculation methodologies will differ depending on the regulation for which applicability is being determined. These are spelled out in rule and policy and are discussed in detail below. It may be helpful to use more than one spreadsheet to show emission changes based on the calculation procedures in each rule. However, only one sheet should summarize the calculated emissions changes as well as any emissions that are limited by applicable rules or proposed to be limited to avoid the applicability of certain rules. Form GI-07 should then be used to show the "revised" emissions from the facility after the change is implemented.

After you've defined the change, you need to determine what type of permit action, if any, is needed under the Minnesota Rules. Using Form CH-02 for that, the first step is to determine if a major amendment is needed.

 <b>Minnesota Pollution Control Agency</b>	MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155-4194	PERMIT CHANGE FORM <b>CH-02</b>  <b>ACTION TYPE DETERMINATION</b> (FORMERLY MOD-02 MODIFICATION CLASSIFICATION FLOW CHART) 05/05/04
<b>1a) AQ Facility ID No.:</b> _____ <b>1b) AQ File No.</b> _____		
<b>2) Facility Name.:</b> _____		
<p>Answer the questions on this form, referring to and completing the additional forms as directed, to determine if a permit or amendment is required (and if so what type), or if a notification is required.</p> <p>3. Does the proposed change or modification require a major amendment? Complete Form CH-03 and all forms referenced therein.</p> <p><input type="checkbox"/> Yes. Go to question 8.</p> <p><input type="checkbox"/> No. Go to question 4.</p>		

### 3.1.2. Changes that trigger a major permit amendment

The first part of determining what type of permit action is needed is to determine if a major amendment is needed. Minn. R. 7007.1500 defines which changes trigger or require a major permit amendment.

**Form CH-03 Major Permit Amendment Determination** works through the requirements to determine if a major permit amendment is needed. Form CH-03 cannot be completed without completing the associated forms to determine if the change is a Title I modification.

### 3.2 Title I modifications

Title I modifications are defined in Minn. R. 7007.0100, subp. 26.

“Title I modification” means any change that constitutes any of the following:

- A. Construction or reconstruction of a major hazardous air pollutant source as defined in Code of Federal Regulations, title 40, section 63.41, as amended, or any other rules adopted by the administrator under section 112(g)(2)(B) of the act.

- B. A new source review modification: major modification as defined in Code of Federal Regulations, title 40, section 52.21(b)(2) or 51.165(a)(1)(v), as amended, or any other rules adopted by the administrator under part C or D of the act.
- C. A new source performance standards modification: any modification as defined in Code of Federal Regulations, title 40, section 60.14, as amended, or any other rules adopted by the administrator under section 111 of the act.
- D. A hazardous air pollutant modification: any modification as defined in Code of Federal Regulations, title 40, section 61.15, as amended, or any other rules adopted by the administrator under section 112 of the act.
- E. Any other change that constitutes a modification under any provision of title I of the act.



MINNESOTA POLLUTION CONTROL  
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PERMIT CHANGE FORM **CH-03**  
**MAJOR PERMIT AMENDMENT**  
**DETERMINATION**  
 (FORMERLY MOD-10 MAJOR PERMIT AMENDMENT  
 DETERMINATION)  
 03/31/04

To answer the questions posed in this form, you will have to complete the additional forms referenced in the individual items.

This form refers to proposed “changes” and “modifications.” A “modification” as defined at Minn. R. 7007.0100, subp. 14, includes

- A. any change that constitutes a title I modification ...; or
- B. any physical change or change in the method of operation of an emissions unit, emission facility, or stationary source that results in an increase in the emission of a regulated air pollutant.

A “change” is a change to permit terms or conditions, in the absence of a modification as described above.

**3)** Is the proposed change or modification a Title I modification? It is if the answer to any of the following is “yes”:

Triggering the applicability of any of these federal rules is a Title I modification and triggers the requirement for a major permit amendment. As will be discussed below, a new emission unit or source, or modification or reconstruction of an existing emission unit or source can, but not always, trigger the applicability of these federal rules. Each of the four federal regulatory programs listed in items A. through D. above are detailed in the following sections.

**3.2.1. New Source Review/Prevention of Significant Deterioration**

**CH-03**

**3a)** Is the proposed change or modification subject to New Source Review? Use and submit Forms CH-04, CH-04a, and/or CH-04b, as applicable.

- YES
- NO

New Source Review (NSR)/Prevention of Significant Deterioration (PSD) applies to major modifications (as defined in Section 3.3 and at 40 CFR § 52.21(b)(2)) at existing major NSR/PSD sources, which are sources with a potential to emit of a regulated PSD pollutant greater than 100 tpy or 250 tpy, depending on the source's primary industrial classification. It can also apply to changes at existing minor sources, if the emissions from the change itself are greater than 100 tpy or 250 tpy, depending on the source's primary industrial classification. Form CH-04 will provide additional information on determining if an existing facility is a PSD major source. Once it has been determined that the change at your facility is not excluded from the definition of major modification (as defined in 40 CFR § Section 52.21(b)(2)(iii)), the emissions need to be calculated to determine whether the change is subject to NSR. This determination begins with Form CH-04.

#### **CH-04**

**1)** Is your facility defined as one of the following types of facilities?

The answer to this question determines in part whether you use form CH-04a or CH-04b and how you calculate emissions from existing sources. If the answer is YES because the facility is one of the 28 source types listed on Form CH-04, the threshold for being a major PSD source is 100 tons/year (on a pollutant-by-pollutant basis). If the answer is "NO" because the facility is not one of the 28 source types listed, the threshold for being a major PSD facility is 250 tons/year (on a pollutant-by-pollutant basis).

#### **CH-04**

**2)** Is the current federally enforceable, PTE of your facility greater than or equal to the 100/250 tpy threshold for your facility, making your facility a major stationary source?

"Current federally enforceable PTE" means the emissions allowed under your existing permit. If you hold a Title V permit that limits the facility emissions to less than 100/250 tpy (whichever is applicable), the answer is NO. If you hold a Title V permit that doesn't limit facility emissions to less than 100/250 tpy, or if you do not hold a total facility operating permit and your uncontrolled/unlimited emissions are greater than 100/250 tpy, the answer is YES. If the answer is NO, the facility is not an existing major PSD source and must use **Form CH-04b Determination of Increases at non-Major Sources** to assess whether or not a Title I Permit Amendment is Required. No further questions on Form CH-04 need be answered if the facility is not a major PSD source.

If the answer is YES, the facility is an existing major PSD source and must use **Form CH-04a Determination of Increases at Major Sources** to determine whether or not a major permit amendment is required because of NSR/PSD regulations. However, before going on to form CH-04a, a number of other questions must be answered to determine whether other exclusions apply.

#### **CH-04**

**3)** Is your facility currently covered by a permit that contains a Plantwide Applicability Limit ("actuals PAL") as defined at 40 CFR § 52.21(aa)(2)(i) and (v)?

If the answer is YES, the facility is covered by a PAL and you must answer question 4). If the answer is NO, there is no need to answer question 4); you can proceed as instructed to question 5). (Note that PALs are covered more fully in at the end of this chapter.)

**CH-04**

**4)** Are you able to continue to meet the emissions limits set by the Plantwide Applicability Limit after the project?

If the answer is YES, you can make the modification within the current PAL limits and do not need to increase the PAL limit. No federal PSD permit is required. However, you may still trigger other state and federal regulations which require a permit amendment. Continue working through the forms.

If the answer is NO, you are seeking to either increase or eliminate the PAL level. To do this, you must determine the best available control technology (BACT) for all major and significant emission units at the source for the pollutant that the PAL covers. The new PAL will be set at the level of BACT for all existing sources and for the new or modified sources as well, and a major PSD permit is required. (Requirements for a major PSD permit are discussed in Chapter 5.)

**CH-04**

**5)** Is the project a pollution control project that is listed in 40 CFR § 52.21(b)(32)(i) through (vi)?

If the answer is NO, proceed to question 6). If the answer is YES, you may be eligible for a pollution control project (PCP) exemption. See Form **PCP-01**. Pollution control projects are discussed more fully in Section 3.5.2.

**CH-04**

**6)** Is the project one that you feel may qualify as a pollution control project, but that is not listed in 40 CFR § 52.21(b)(32)(i) through (vi)? (See the fact sheet on Pollution Control Projects at <http://www.pca.state.mn.us/air/permits/nsr>, or Form PCP-01?)

If the answer is NO, you are not seeking a case-by-case PCP exemption. Proceed to question 7). If the answer is YES, you may be eligible for a PCP exemption. Complete Form **PCP-01**. Pollution Control Projects are discussed more fully in Section 3.5.2.

**CH-04**

**7)** **Synthetic Minor Source:** Are you proposing federally enforceable synthetic minor limits on the PTE of the facility to make the entire facility (including the proposed modification) a synthetic minor source?

A synthetic minor source would otherwise be a PSD major source, but has accepted emission limits at an emission unit(s) or at the entire source in order to keep the entire source below the 100/250 tpy PSD major source threshold.

If the answer is NO, you are a major PSD source potentially subject to the requirements of PSD, and you must use **Form CH-04a Determination of Increases at Major Sources** to determine if you require a major amendment.

If the answer is YES, you are choosing to become a non-major or minor PSD source, which upon permit issuance will not be subject to the requirements of PSD, and you will require a major permit amendment to make the proposed synthetic minor limits federally enforceable. In this case, Form CH-04a is not applicable, but the proposed synthetic minor limits must be entered on Form CD-01.

### Form CH-04a: Determination of Increases at Major Sources

Once you have determined you are a major PSD source, you need to complete Form CH-04a to determine if the change contemplated is a major PSD modification.

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Form CH-04a begins with changes to existing units, as opposed to addition of new units or replacement of existing units with new units, which are covered later in the form. A unit is "modified" when either a physical change is made to the equipment or a change is made to the method of operating that equipment.

There are specific exemptions and exceptions to the definition of "modification" in state and federal rules. These were discussed in Chapter 1, and the reader is urged to review those exemptions and exclusions prior to completing form CH-04a.

A unit that does not undergo a physical change or a change in the method of operation may still experience a project-related emissions increase. For example, an emission unit that will be modified may cause or allow an increase in utilization or capacity at a non-modified emission unit that is located upstream or downstream of the emission unit that underwent a change. This is sometimes referred to as "debottlenecking," although USEPA does not use this term in the current PSD rules.

As an example of a project-related emissions increase, an existing process unit is modified to increase production. The process unit requires steam from a boiler in the utilities area, so the modified process unit will require additional steam upon completion of the expansion. The boiler, although not modified as part of the project, will experience an emissions increase as a function of the higher steam demand at the process unit. This related emissions increase at the boiler must be included in the calculation for the overall project emissions increase.

For existing units at major sources, there are multiple choices in determining how to calculate the emissions increase associated with a change. In general, one must compare the emissions before the

change (also called pre-modification or baseline) with emissions after the change (also called post-modification). Under NSR Reform, there are a number of options for calculating emissions at existing units for both "before" and "after" the change.

## Exemptions

Federal rules (see 40 CFR § 52.21(b)(2) definition of "major modification") make certain activities exempt from PSD permitting requirements. These are listed below.

If you intend to claim such an exemption, answer NO to line 3a of Form CH-03 and write a note to the right of the check box that says "see the attached documentation." Prepare the documentation and attach it to the form.

A particular change may qualify for exemption from PSD permitting requirements, but there are other triggers for major permit amendments and other state and federal requirements which may require a major permit amendment. It is important to continue working through the forms to be sure that no other triggers are missed.

### PSD Exemptions at 40 CFR § Section 52.21 (b)(2):

1. Routine maintenance, repair, and replacement
2. Use of an alternative fuel or raw material by reason of an order under sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plant pursuant to the Federal Power Act; or use of an alternative fuel by reason of an order or rule under section 125 of the Act; or use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
3. Use of an alternative fuel or raw material by a stationary source which: (1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 pursuant to 40 CFR § 52.21 or under regulations approved pursuant to 40 CFR § subp. I or 40 CFR § 51.166; or (2) The source is approved to use under any permit issued under 40 CFR § 52.21 or under regulations approved pursuant to 40 CFR § 51.166;
4. An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR § 52.21 or under regulations approved pursuant to 40 CFR § subp. I or 40 CFR § 51.166.
5. Any change in ownership at a stationary source.
6. The addition, replacement, or use of a PCP, as defined in paragraph (b)(32) of 40 CFR § 52.21 ... (see New Options under NSR below).
7. The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with: (1) The State implementation plan for the State in which the project is located, and (2) Other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
8. The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

9. The reactivation of a very clean coal-fired electric utility steam generating unit.
10. This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under paragraph (aa) of this section for a PAL for that pollutant. Instead, the definition at paragraph (aa)(2)(viii) of this section shall apply.

Unfortunately, while some exemptions are clearly spelled out, there is nothing in the remainder of the rules or definitions that help define what constitutes the first and most common exemption for “routine maintenance, repair, and replacement.” USEPA has promulgated rules to better define “routine maintenance repair or replacement,” but those rules have been challenged in court, and implementation of the rules is stayed pending resolution of the legal challenges. If you intend to claim such an exemption, it is important to document why a particular action qualifies for the exemption at the time of determination.

### **“Before” Or Baseline Emissions – Existing Units**

Emissions “before” the change (usually called pre-modification or baseline actual emissions) can be calculated one of two ways, depending on the type of facility. Electric Utility Steam Generating Units (EUSGUs) may use the average emissions of any 24 consecutive months during the past 5 years of operation. Non-EUSGUs may use the average emissions of any 24 consecutive months during the past 10 years of operation. More detail is provided in Chapter 2.

### **“After” Emissions – Existing Units**

Emissions after the change can be calculated either by: (1) using potential to emit of the changed unit, or (2) using projected actual emissions of the changed unit. As noted in Chapter 2, according to 40 CFR § 52.21(b)(4):

“Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material 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. Secondary emissions do not count in determining the potential to emit of a stationary source.”

Additional detail is provided in Chapter 2.

Certain emissions can be excluded from projected actual emissions, as noted in the 40 CFR § 52.21(b)(41)(ii)(c):

“In determining the projected actual emissions under paragraph (b)(41)(i) of this section (before beginning actual construction), the owner or operator of the major stationary source: ...  
(c) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (b)(48) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth;”

For some facilities (e.g. electric utility steam generating utilities [EUSGUs]), it may be relatively easy to determine the exclusion, as capacity and demand are predicted on a regular basis for other regulatory programs. For other facilities, quantifying these exclusions may be more difficult. A description of the exclusion is required in the fifth column of Table A of Form CH-04a. As this is likely insufficient space, additional sheets should be attached to the form that more fully explain the exclusions.

Also, using projected actual emissions will involve recordkeeping requirements on all facilities and reporting requirements on EUSGUs, whereas using the potential to emit will not impose these requirements. You should consider the cost and potential compliance liability that those requirements may impose. If projected actual emissions are used, include those requirements on Form CD-01.

### **Increases From Existing Units**

#### **CH-04a**

#### **TABLES 1 AND 2**

On Table 1 of Form CH-04a, subtract the “before” emissions (baseline actual emissions) from the “after” emissions which include the exclusions if using future projected actuals. If using potential emissions for the after emissions subtract only baseline actual emissions. Write the result in the sixth column of Table 1. Do this for each existing emission unit affected by the change/project, including calculations for all of the PSD pollutants which that unit emits.

Once the information for each existing emission unit affected by the change/project and all pollutants from those emission units is entered in Table 1, sum the emissions in Table 2. Emission units are entered in the top row, with emissions for that emission unit following in the column below. If more than five emission units are changed, Table 2 can be copied or expanded to include additional emission units. For each row (each PSD pollutant), emission increases from all changed existing units are summed in the last column of Table 2 of Form CH-04a.

### **Increases From New Units**

#### **CH-04a**

#### **TABLE 3**

Table 3 of Form CH-04a summarizes the emission increases from new units. For new units, the “before” or baseline emissions are zero, and the “after” emissions, by rule, are equal to the potential to emit, which may be restricted either by an applicable rule or voluntarily in order to reduce the emissions increase (Note that units that are less than two years old are treated differently). For each new unit being added to a source, you should include the potential to emit for all of the pollutants in the table and sum each pollutant in the last column.

## Project Summary

### CH-04a

#### TABLE 4

On Table 4 of Form CH-04a, follow the instructions to transfer the emissions from the appropriate columns of Tables 2 and 3 into the appropriate columns, and sum the emission increases from the entire project. Compare the sum for each pollutant to the PSD significant emission rate (or PSD thresholds) in the final column of Table 4.

If the emissions summation in any row is greater than the PSD threshold, the project will require a major permit amendment, but it is not necessarily a major modification subject to PSD. If you do not want to go through a major PSD permit process, there are two possible alternatives.

1. **Synthetic minor limits.** A facility may propose federally enforceable limits such that the emissions increase is restricted to less than the PSD threshold.
2. **Netting analysis.** A facility may perform a netting analysis of facility-wide contemporaneous and creditable emissions increases and decreases to show that the "net" emissions increase is less than the PSD threshold.

Both of these options require a non-Title I Major Modification and are discussed in Chapter 7. If you are able to take advantage of one of these options to avoid PSD, answer NO to question 3a on Form CH-03, and go on to question 3b.

If you cannot or do not wish to take limits or do a netting analysis to avoid PSD, then the change/project is a Title I modification. In this case, answer YES to question 3a on Form CH-03 and go to question 3b.

If the emissions summation in all rows of Table 4 on Form CH-04a is less than the corresponding PSD threshold, document the increase in Form CH-04a and go to question 3b (covered in Section 3.2.2.).

### 3.2.2. NSPS Applicability

#### CH-03

**3b)** Is the proposed change or modification a modification or reconstruction as defined for New Source Performance Standards? Use and submit Form CH-05.

YES

NO

On **Form CH-03 Major Permit Amendment Determination**, Question 3b concerns the applicability of New Source Performance Standards (NSPS) to a changed or new emission unit or source. Use **Form CH-05 Applicability of New Source Performance Standards (NSPS)** to determine whether or not an NSPS may apply to your facility.



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PERMIT CHANGE FORM **CH-05**  
**APPLICABILITY OF NSPS**  
 (FORMERLY MOD-05 APPLICABILITY OF NSPS)  
 05/05/04

**CH-05**

3) Is there a NSPS for a source category which includes the unit(s) you are installing, modifying, or reconstructing?

Yes. Go to question 4

No. Done with this Form. Answer "No" to question 3b) on Form CH-03.

New Source Performance Standards apply to specific types of emission units at specific types of sources. Examples are a tank which stores petroleum at a refinery or terminal and a coating operation in a certain type of manufacturing (e.g. coating of metal parts for appliances). Sometimes, although not always, there are size thresholds as well (e.g. an NSPS which applies only to boilers which are larger than 10 MMBtu/hr heat input). It is often not apparent from the title whether the NSPS applies to a specific source or emission unit; it is important to read the applicability section in each NSPS subpart. As the "new" in New Source Performance Standard implies, these apply to new sources upon construction and to existing "grandfathered" sources that become subject due to modification or reconstruction of the source.

If the title of the NSPS subpart looks like something which may apply to your unit/source, the applicability section should be reviewed carefully to determine whether or not the NSPS applies. Although not required, some sources will make a table of each of the NSPS listed in the instructions to Form CH-05 and note why the standard does not apply when making a change. Some reasons will be obvious (e.g., the emission unit is not a steam boiler), while others will be more complex and will cite exemptions or exclusions in the rule itself.

If, after reviewing the applicability sections of the potentially applicable rules, list any of the rules in question 4 which may potentially apply to existing units which will be changed. If no NSPS apply to the unit(s) affected by the project/change, answer NO, and also answer NO on question 3b) on Form CH-03.

4) Complete Question 4a) – 4c) for each new, modified, or reconstructed unit which may be subject to an NSPS following the proposed project. (Copy as necessary.)		
4a) Unit	4b) NSPS Subpart(s) that may apply after project	4c) Do all of the NSPS listed in column 4b) for the unit listed in column 4a) currently apply (prior to the proposed project)? If this is a new unit, the answer is "no."
		<input type="checkbox"/> Yes – done with this unit <input type="checkbox"/> No

	<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
	<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
	<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
	<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No

If you did not check “no” for any emission unit in column 4c) answer “no” to question 5. As noted, you are finished with this form and can answer “no” to question 3b on Form CH-03. If you checked “no” for even one emission unit in column 4c), answer “yes” to question 5, and complete the remainder of Form CH-05 for that unit or units for which you checked “no” in column 4c).

**5)** Did you check “no” in column 4c) for any unit in the table in question 4)?

No. This indicates that NSPS currently applies to all units and there will be no newly applicable NSPS as a result of the proposed project. Done with this form. Answer “no” to question 3b on Form CH-03.

Yes. Complete the remainder of this form for each unit for which you checked “no” in the last column of the table in question 4.

Note that construction of a new unit subject to NSPS is not a Title I modification and therefore does not by itself trigger a major permit amendment. However, reconstruction or modification of an existing unit that makes it subject to NSPS is a major permit amendment because it meets the definition of “Title I modification.”

### New Units

**6)** Installing a new unit to which the NSPS will apply?

No. Go to Question 7).

Yes – Complete Questions 6a) – 6e) for each new unit. (Copy as necessary.)

**6a)** Emission Unit Number \_\_\_\_\_

**6b)** Emission Unit/Equipment Description \_\_\_\_\_

**6c)** Stack/Vent Number \_\_\_\_\_

**6d)** Date of Equipment Manufacture or Installation \_\_\_\_\_ (Month/Date/Year)

**6e)** Attach a copy of the applicable 40 CFR pt. 60 subpart, with the applicable sections highlighted. Use Form CD-01 to document the proposed methods of compliance.

Even though a new unit that is subject to NSPS will not trigger a major amendment by mere virtue of the fact that it is subject to NSPS, it is important to complete this question since it is possible that a permit amendment will still be needed for this change, based on the emissions. If an NSPS is applicable to a new unit, answer YES to question 6, and fill in the required information in the boxes for questions 6a through 6e. Duplicate the forms as needed if there is more than one unit. If there are no new units being built as part of a project, you should answer NO and go to question 7.

Note that question 6 asks for a highlighted copy of the regulation with “applicable” sections highlighted. For many NSPS, there are multiple methods of compliance and multiple methods of compliance demonstration available. Be sure to highlight only those sections, or portions of sections, which reflect the chosen method of compliance and compliance demonstration. Also, be sure to include all of this information on the Form CD-01.

Once an NSPS is triggered, additional requirements in the General NSPS Regulation (40 CFR 60, Subpart A) also apply to the facility. Be sure to include a highlighted copy of Subpart A as well, and include the requirements on Form CD-01.

### Existing Units

Reconstructing or modifying an existing emission unit can make that unit subject to an NSPS.

### Reconstruction

<b>7)</b> Reconstructing an existing unit to which an NSPS will apply? <input type="checkbox"/> No. Go to Question 8). <input type="checkbox"/> Yes – Complete Questions 7a) – 7e) below for each reconstructed unit. (Copy as necessary.)	
<b>7a)</b>	Emission Unit Number _____
<b>7b)</b>	Emission Unit/Equipment Description _____
<b>7c)</b>	Stack/Vent Number _____
<b>7d)</b>	Date of Reconstruction (expected) _____ (Month/Date/Year)
<b>7e)</b>	Attach a copy of the applicable 40 CFR pt. 60 subpart, with the applicable sections highlighted. Use Form CD-01 to document the proposed methods of compliance.

Reconstruction is defined in Subpart A of 40 CFR 60, specifically §60.15, and there is an abundance of guidance available from USEPA on its website. Whether or not an emission unit is deemed to be reconstructed centers on the level of reconstruction and the cost of the reconstruction relative to the original cost of the unit. A unit that is reconstructed, even if there is no increase in emissions, can become subject to NSPS, if “the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility.”

If the existing unit triggers reconstruction, you should answer YES to question 7 and fill in the required information in the boxes for questions 7a through 7e. Duplicate the forms as needed if there is more than one unit. If there are no existing units being reconstructed as part of this project, answer NO and go to question 8.

Question 7 also asks for a highlighted copy of the regulation with “applicable” sections highlighted. For many NSPS, there are multiple methods of compliance and multiple methods of compliance demonstration available. Be sure to highlight only those sections, or portions of sections, which reflect the chosen method of compliance and compliance demonstration. Also, you should include all of this information on the Form CD-01.

Note also that once an NSPS is triggered, additional requirements in the General NSPS Regulation (40 CFR § 60, Subp. A) also apply to the facility. Be sure to include a highlighted copy of Subpart A as well, and include the requirements on Form CD-01.

### Modification

<b>8)</b> Physical change or modification to an existing unit to which the NSPS might apply? <input type="checkbox"/> No. Go to Question 10). <input type="checkbox"/> Yes – Complete Question 8a) for each modified unit. (Copy as necessary.)			
<b>8a)</b> Emission Unit ID No.:			
Pollutant(s) regulated by the NSPS	Emission Rate after change (lb/hr)	Emission Rate before change (lb/hr)	Change in Emission Rate (lb/hr)
<input type="checkbox"/> PM			
<input type="checkbox"/> PM <sub>10</sub>			
<input type="checkbox"/> NO <sub>x</sub>			
<input type="checkbox"/> SO <sub>2</sub>			
<input type="checkbox"/> CO			
<input type="checkbox"/> VOC			
<input type="checkbox"/> Lead			

As with the PSD rules, a modification means “a physical change or a change in the method of operation.” And as with PSD, there are specific exclusions to this definition, as written in 40 CFR § 60.14. These include:

- Routine maintenance, repair or replacement
- Increase in production rate without capital expenditure
- Increase in hours of operation (without any other accompanying change)
- Use of alternative fuel or raw material if designed to accommodate (prior to date of the standard)
- Addition or use of pollution control equipment
- Relocation/change in ownership

Note that individual New Source Performance Standards may also have exclusions, which are noted in the applicability section of the individual subpart. The first step is to determine if the proposed changes are covered by one of the exclusions. If so, it is important to document the specific exclusion in writing and attach the documentation to Form CH-05.

Unless a change to a unit is large enough to trigger reconstruction (see above), a change in and of itself will not trigger an NSPS. There also needs to be an associated increase in emissions at the unit. However, the emissions increase calculation under NSPS is different than for NSR/PSD applicability. For NSPS applicability, you first need to identify those pollutants that are regulated by the individual NSPS subpart. For example, if an emission unit is expected to have an increase in emissions for only SO<sub>2</sub> and the NSPS does not regulate that pollutant, then the unit does not trigger NSPS.

For those pollutants regulated by NSPS, calculate and compare the hourly emission rate (lb/hr) at maximum capacity before and after the change for each unit. This calculation is different than under NSR/PSD applicability, where the calculations are generally based on an annual average and expressed in tons/year. Also unlike NSR/PSD applicability, there is no threshold in NSPS applicability. **Any** increase in

emissions, even a fraction of a pound per hour, triggers NSPS. Be careful with significant digits in calculations. If you really know an emission factor or production variable to 0.01 pounds per hour, than calculate it at that level. If you only know the value to the nearest 0.1 or 1 pound per hour, calculate it at that level.

Another important recognition under NSPS is that an enforceable limit to restrict actual emissions cannot be taken to avoid NSPS applicability. For example, if a grandfathered boiler with a heat input design capacity of 50 mmBtu/hr undergoes a change that increases its capacity to 60 mmBtu/hr, you cannot accept a limit on actual hourly NOx emissions such that there is no emissions increase. Rather, the NOx emissions increase must be calculated based on the new heat input capacity minus the existing heat input capacity. Unless the source installs control technology to lower the NOx emission factor, it is likely that the NOx emissions increase will be greater than zero, thus subjecting the boiler to NSPS.

If the modified unit is subject to NSPS, enter the emission rate information in pounds per hour on Form CH-05 in question 8a). Note that you need only consider those pollutants that are regulated by the NSPS. If there is an increase in any of the pollutants for which the NSPS imposes a standard, the NSPS may be triggered.

If the emissions increase is greater than zero, answer YES to question 8 and go to question 9. If there is no increase for any pollutant, answer NO and got to question 9.

- 9)** Is there an increase in the hourly emission rate of any of the pollutants regulated by the NSPS?
- No. Go to Question 10).
- Yes – Complete Questions 9a) – 9d) below for each modified unit. (Copy as necessary.)
- 9a)** Emission Unit/Equipment Description
- 9b)** Stack/Vent Number
- 9c)** Date of Modification (expected) (Month/Date/Year)
- 9d)** Attach a copy of the applicable 40 CFR pt. 60 subpart, with the applicable sections highlighted. Use Form CD-01 to document the proposed methods of compliance.

Question 9 determines whether or not an NSPS is triggered as a function of the data entered in questions 6 and 6a). If a NSPS regulates only certain pollutants (e.g. CO, NOx and SO<sub>2</sub>) and there is an increase in, say, VOC, but not in the regulated pollutants, the NSPS is not triggered. In this case, answer NO to question 9 and go to question 10. However, if there was an increase in a regulated pollutant, such as CO, the NSPS is triggered. In this case, answer YES to question 9 and fill in the information required in question 9a through 9d.

Note that question 9 again asks for a highlighted copy of the regulation with “applicable” sections highlighted. For many NSPS, there are multiple methods of compliance and multiple methods of compliance demonstration available. Highlight only those sections, or portions of sections, which reflect the chosen method of compliance and compliance demonstration. Also be sure to include all of this information on the Form CD-01.

Once an NSPS is triggered, additional requirements in the General NSPS Regulation (40 CFR § 60, Subp. A) also apply to the facility. Be sure to include a highlighted copy of Subpart A as well, and include the requirements on Form CD-01.

10) Check all that apply

- If you answered either “yes” or “no” to question 6) and “no” to questions 7) and 8) or 9), a major amendment is not needed under Minn. R. 7007.1500, subp. 3a. Answer “no” to Question 3b) on Form CH-03. Another type of permit amendment may still be required.
- If you answered “yes” or “no” to question 6), and “yes” to question 7) and/or 9), this change or modification requires a major amendment under Minn. R. 7007.1500, subp. 3a. Answer “yes” to Question 3b) on Form CH-03.
- If you answered “yes” to question 6), 7), or 9), **but the total facility potential-to-emit remains below all permit thresholds**, you are required to obtain a permit only for the emission unit(s) subject to the NSPS. This source may qualify for an Option A Registration Permit if the applicable NSPS subpart identified in Question 4) is one of the following: Dc, K, Ka, Kb, DD, EE, SS, JJJ, OOO, TTT, or I.

Question 10 helps to fill in question 3b) on Form CH-03 for the assorted answers to questions 6, 7, 8 and 9. If all four questions are NO, or if question 6 is YES and questions 7 through 9 are NO, then the project is not a Title I modification under NSPS. If you answer YES to questions 7 or 9, then the project is a Title I modification and requires a major permit amendment. However, if the project is subject only to a major permit amendment because of this applicability criterion, then the procedures for obtaining the authorization to construct are streamlined, as detailed in Minn. R. 7007.1500, subp. 3a.

### 3.2.3. Part 61 NESHAPs Applicability

On **Form CH-03 Major Permit Amendment Determination**, Question 3c concerns applicability of Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs) to a changed emission unit or source.

#### CH-03

**Question 3c) Is the proposed change or modification a hazardous air pollutant modification under Part 61 NESHAPs? Use and submit Form CH-06.**

Note that there are two types of NESHAPs. One, codified in Part 61 of Part 40 of the CFR, applies to specific pollutants at a limited number of facilities. The other, codified in Part 63 of Part 40 of the CFR, applies to specific source types of categories and may include requirements for multiple pollutants. Beginning with Part 61 NESHAPs, use **Form CH-06 Applicability of Part 61 NESHAPs** to determine whether or not a proposed change will trigger this.



MINNESOTA POLLUTION CONTROL  
 AGENCY  
 AIR QUALITY  
 520 LAFAYETTE ROAD  
 ST. PAUL, MN 55155-4194

PERMIT CHANGE FORM **CH-06**

**APPLICABILITY OF PART 61 NESHAP**  
 (FORMERLY MOD-06 APPLICABILITY OF PART 61 NESHAP)  
 03/31/04

**3)** Is there a Part 61 NESHAP for a source category which includes the unit(s) you are installing, modifying, or reconstructing?

- Yes. Go to question 4
- No. Done with this Form. Answer "No" to question 3c) on Form CH-03.

Review the list of NESHAPs on page 5 of the form instructions. If you do not emit any of the pollutants in the first column, no Part 61 NESHAPs apply to you. Note, however, that if you have older buildings which contain asbestos (for example, in pipe insulation, ceiling and floor tiles, siding or roofing) you may be subject to Part M if and when you renovate or demolish your facility. Part M contains requirements for notification, sampling and analysis, and proper disposal of asbestos-containing waste.

Also check closely the benzene Part 61 NESHAPs under subparts BB and FF. While some subparts apply to production, storage or recovery of benzene, Subpart FF applies to management of wastes, including wastewater that contains as little as 1% or 10% benzene. If you use benzene and some of it ends up in your waste streams, those streams could be subject to NESHAPs.

If the subpart title looks like something which may apply, you should carefully review the applicability section—often part (a) of the particular NESHAP—to determine whether the NESHAPs applies to a given emission unit at a given facility. Although not required, some sources will make a table of each of the NESHAPs listed in the instructions to Form CH-06 and note why the standard does not apply when making a change. Some reasons will be obvious (the emission unit is not a vinyl chloride production facility), while others will be more complex and will cite exemptions or exclusions in the rule itself. Review the applicability sections of the potentially applicable rules, and list any rule which may potentially apply to units which will be changed, or new units at the source in question 4. If no Part 61 NESHAPs apply to your source, answer NO, and also answer NO on question 3b) on Form CH-03.

**4)** Complete Question 4a) – 4c) for each new, modified, or reconstructed unit which may be subject to a Part 61 NESHAP following the proposed project. (Copy as necessary.)

4a) Unit	4b) Part 61 Subpart(s) that may apply after project	4c) Do all of the NESHAPs listed in column 4b) for the unit listed in column 4a) currently apply (prior to the proposed project)? If this is a new unit, the answer is "no."	
		<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
		<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
		<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
		<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No
		<input type="checkbox"/> Yes – done with this unit	<input type="checkbox"/> No

5) Did you check “no” in column 4c) for any unit in the table in question 4)?

No. This indicates that NESHAP currently applies to all units and there will be no newly applicable NESHAPs as a result of the proposed project. Done with this form. Answer “no” to question 3c on Form CH-03.

Yes. Complete the remainder of this form for each unit for which you checked “no” in the last column of the table in question 4.

**New Units**

6) Installing new equipment which will cause a Part 61 NESHAP to apply?

No - Go to question 7).

Yes – Complete 6a) – 6c) for each new unit. (Copy as necessary.) Use Form CD-01 to document the proposed methods of compliance. Include a highlighted photocopy of the standard.

6a) Emission Unit Number \_\_\_\_\_

6b) Emission Unit/Equipment Description \_\_\_\_\_

6c) Stack/Vent Number \_\_\_\_\_

If a Part 61 NESHAPs is applicable at a source, any new units to which the Part 61 NESHAPs is applicable are automatically covered. Answer YES to question 6 and fill in the required information in the boxes for questions 6a through 6e. Duplicate the forms as needed if there is more than one unit. If there are no new units being built as part of a project, answer NO and go to question 7.

**Modification**

7) Physical or operational change to an existing unit such that a Part 61 NESHAP will apply?

No. Go to question 9).

Yes - Complete 7a) for each modified unit. (Copy as necessary.) Then go to question 8).

7a) Emission Unit ID No.:

Pollutant	Emission Rate after change (lb/hr)	Emission Rate before change (lb/hr)	Change in Emission Rate (lb/hr)

As with NSR, a modification means a physical change or a change in the method of operation. However, there are exclusions in 40 CFR § 61.15(d). These include:

- Maintenance, repair, and replacement which the Administrator determines to be routine for a source category.
- An increase in production rate of a stationary source, if that increase can be accomplished without a capital expenditure on the stationary source.
- An increase in the hours of operation.
- Any conversion to coal that meets the requirements specified in Section 111(a)(8) of the Act.

- The relocation or change in ownership of a stationary source. However, such activities must be reported in accordance with 40 CFR Sec. 61.10(c).

Note also that individual Part 61 NESHAPs have exclusions, sometimes noted in the applicability section but sometimes noted elsewhere. The first step is to determine if the proposed changes are covered by one of the exclusions. If so, it is important to document that exclusion, in writing, and attach the documentation to Form CH-05.

A change to a unit in and of itself will not trigger a Part 61 NESHAPs. There also needs to be an associated increase in emissions at the unit. However, the emissions increase calculation under Part 61 NESHAPs is different than for NSR/PSD applicability. For Part 61 NESHAPs applicability, you first need to identify those pollutants that are regulated by the individual Part 61 NESHAPs subpart. For example, if an emission unit is expected to have an increase in emissions for only benzene and the Part 61 NESHAPs does not regulate that pollutant, then the unit does not trigger Part 61 NESHAPs.

For those pollutants regulated by Part 61 NESHAPs, calculate and compare the hourly emission rate (lb/hr) at maximum capacity before and after the change for each unit. This calculation is different than under NSR/PSD applicability, where the calculations are generally based on an annual average and expressed in tons/year. Also unlike NSR/PSD applicability, there is no threshold in Part 61 NESHAPs applicability. Any increase in emissions, even a fraction of a pound per hour, triggers Part 61 NESHAPs. Be careful with significant digits in calculations. If you really know an emission factor or production variable to 0.01 pounds per hour, than calculate it at that level. If you only know the value to the nearest 0.1 or 1 pound per hour, calculate it at that level.

If the modified unit is subject to Part 61 NESHAPs, enter the emission rate in pounds per hour on Form CH-06 in question 7a). Note that you need only the specific pollutant regulated under the Part 61 NESHAP. If there is an increase in the pollutants for which the Part 61 NESHAPs imposes a standard, then the Part 61 NESHAPs may be triggered.

If there is any increase, answer YES to question 7, and go to question 8. If there is no increase for any pollutant, answer NO and go to question 9.

<p><b>8)</b> Is there an increase in the emission rate of any of the pollutants regulated by the Part 61 NESHAP?</p> <p><input type="checkbox"/> No. Go to question 9).</p> <p><input type="checkbox"/> Yes – Complete questions 8a) – 8c) for each modified unit. (Copy as necessary.)</p> <p>Use Form CD-01 to document the proposed methods of compliance. Include a highlighted photocopy of the standard.</p> <p><b>8a)</b> Emission Unit/Equipment Description</p> <p><b>8b)</b> Stack/Vent Number</p> <p><b>8c)</b> Date of Modification (expected) (Month/Date/Year)</p>
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Question 8 determines whether or not a Part 61 NESHAPs is triggered. If there is no increase in the regulated pollutant, answer NO to question 8 and go to question 9. If there is an increase, then the Part

61 NESHAPs is triggered. Answer YES to question 8, and fill in the information required in question 8a (copy down the information in 7a above).

Note that question 8 asks for a highlighted copy of the regulation with “applicable” sections highlighted. For some Part 61 NESHAP, particularly Subpart FF for Benzene Waste Operations, there are multiple methods of compliance and multiple methods of compliance demonstration available. Be sure to highlight only those sections, or portions of sections, which reflect the chosen method of compliance and compliance demonstration. Also, be sure to include all of this information on the Form CD-01.

Once a Part 61 NESHAPs is triggered, additional requirements in the General NESHAPs Regulation (40 CFR 61, Subpart A) also apply to the facility. You should include a highlighted copy of Subpart A as well, and include the requirements on Form CD-01.

**9) Check all that apply**

- If you answered “yes” or “no” to question 6) and “no” to question 7) or 8), a major amendment is not needed under Minn. R. 7007.1500, subp. 1.D. Answer “no” to Question 3c) on Form CH-03. Another type of permit amendment may be required.
- If you answered “yes” or “no” to question 6) and “yes” to question 8), this change or modification requires a major amendment under Minn. R. 7007.1500, subp. 1.D. Answer “yes” to Question 3c) on Form CH-03.
- If you answered “yes” to question 6) or 8), **but the total facility potential-to-emit remains below all permit thresholds**, you are required to obtain a permit only for the emission unit(s) subject to the Part 61 NESHAP.

Question 9 helps to fill in question 3c) on Form CH-03 for the assorted answers to questions 6, 7, and 8. If all three questions are NO, or if question 6 is YES and questions 7 or 8 are NO, then the project is not a Title I modification under NESHAPs. If you answer YES to question 8, then the project is a Title I modification and requires a major permit amendment.

### 3.2.4. Part 63 NESHAPs Applicability

On **Form CH-03 Major Permit Amendment Determination**, Question 3d concerns applicability of Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAPs) to a changed emission unit or source.

#### CH-03

**Question 3d) Is the proposed change or modification defined as construction or reconstruction under Part 63 NESHAPs? Use and submit Form CH-07.**

As noted earlier in this chapter, there are two types of NESHAPs. Part 61 of 40 CFR applies to specific pollutants at a limited number of facilities. The NESHAPs codified in Part 63 of 40 CFR apply to specific source types of categories and may include requirements for multiple pollutants.

You can use Form CH-07 Applicability of Part 63 NESHAPs to determine whether or not a proposed change will trigger a Part 63 NESHAPs.

 <b>Minnesota Pollution Control Agency</b>	<b>MINNESOTA POLLUTION CONTROL</b>	<b>PERMIT CHANGE FORM CH-07</b>
	AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155-4194	<b>APPLICABILITY OF PART 63 NESHAP</b> (FORMERLY MOD-07 APPLICABILITY OF PART 63 NESHAP) 05/05/04

**3)** Does this permit application seek authorization to construct or reconstruct a major source of HAP (10 tpy or more of any pollutant listed on Table A, or 25 tpy or more of any combination of pollutants listed in Table A, before any proposed permit limits are considered)?

Yes. Answer “yes” to question 3d) on Form CH-03. Go on to question 4.

No. Go on to question 4.

The definition of a major HAP source is one that emits 10 tpy or more of a single hazardous air pollutant (those listed in Table A of Form CH-07) or which emit 25 tpy or more of any combination of the hazardous air pollutants listed in Table A. If the source is a major HAP source, then some Part 63 NESHAPs may apply if the category of emission unit is regulated. Under Part 63 NESHAPs, both new and existing emission units are regulated, although in some cases with different standards of performance. Note that simply modifying an existing source (as opposed to reconstructing such a source) does not trigger a Part 63 NESHAP – the existing source remains an existing source, subject to the existing source standards of the particular MACT standard, and not the new source standards.

Even if the answer to Question 3 is NO, you must determine whether or not any of standards in Table B apply.

**4)** Does this permit application seek authorization to construct or reconstruct equipment belonging to any of the area source categories listed below? If so, place a check in the box next to that category and read the specified NESHAP for Source Categories to determine all applicable requirements for area sources. The rules for these source categories may apply even if your facility is not considered a major source for hazardous air pollutants. If you check one or more categories below, you must answer “YES” to question 3d) when you return to Form CH-03.

Hard and Decorative Chromium Electroplating (40 CFR pt. 63, subp. N)

Chromium Anodizing Tanks (40 CFR pt. 63, subp. N)

Ethylene Oxide Commercial Sterilization and Fumigation Operations (40 CFR pt. 63, subp. O)

Perchloroethylene Dry Cleaning Facilities (40 CFR pt. 63, subp. M)

Secondary Lead Smelting Facilities (40 CFR pt. 63, subp. X)

Halogenated Solvent Degreasers (40 CFR pt. 63, subp. T)

Yes. If you answered “yes” to question 3, go on to question 5. If you answered “no” to question 3, you are finished with this form, and should answer “no” to question 3d) on Form CH-03.

No. If you answered “yes” to question 3, go on to question 5. If you answered “no” to question 3, Part 63 NESHAP is not applicable. You are finished with this form. Answer “no” to question 3d) on Form CH-03.

The MACT standards listed in question 4 apply to area sources and may apply to sources that emit less than 10 tpy of any individual HAP or 25 tpy of all HAPs. If you are not a major HAP source (you answered NO to question 3), and none of these area source MACT standards apply to you, then you are finished with the form, and as indicated, should answer NO to question 3d) on Form CH-03.

If the answer is YES to questions 3, regardless of the answer to question 4, you need to continue with question 5.

- 5)** Not considering any limits you may be proposing, would your proposed project be subject to any of the promulgated standards as listed in Table B?
- Yes. Go to question 6.
- No, my facility may be subject to preconstruction review requirements under section 112(g)(2)(B). Go to question 7.

Look at the list of Part 63 NESHAPs in Table B of Form CH-07. In some cases it may be possible to determine that a particular NESHAPs does or does not apply. If the title looks like something which may apply, you should review the applicability section carefully to determine whether the NESHAPs applies to a given emission unit at a given facility. Although not required, some sources will make a table of each of the NESHAPs listed in Table B of Form CH-07 and note why the standard does not apply when making a change. Some reasons will be obvious (the emission unit is not a vinyl chloride production facility), while others will be more complex and will cite exemptions or exclusions in the rule itself.

Review the applicability sections of the potentially applicable rules, list any rules which may potentially apply to units which will be changed, or new units at the source in question 3. If no promulgated Part 63 NESHAPs applies to your source, answer NO and go to question 6 of Form CH-07. If one or more Part 63 NESHAPs may apply to your source, answer YES and go to question 6.

- 6)** If you answered “Yes” to question 5, it may be possible to avoid applicability of the MACT standard for the proposed project by proposing a federally enforceable permit conditions to limit your potential HAP emissions to less than 10 tons per year for each HAP and/or 25 tons per year for all HAPs combined from the new proposed project. Do you want to accept permit limitations on HAPs to avoid the MACT requirement?
- No. Read the applicable MACT standard to determine all applicable requirements. Use form CD-01 to describe the requirements and your proposed methods of compliance demonstration. Include a photocopy of the standard with the applicable portions highlighted.
- Yes. Go to question 8.

If a source emits only slightly more than the 10 or 25 tpy thresholds for being a major HAP source, it may be possible to take a permit limitation that limits emissions to below the thresholds so that no Part

63 NESHAPs apply but sufficient operational flexibility is maintained. If you choose to take such a limitation, answer YES, and go to question 8. If a source chooses to remain a major HAP source and subject to one or more Part 63 NESHAP, answer NO to this question, and include a copy of the regulation with "applicable" sections highlighted. For most Part 63 NESHAPs, there are multiple methods of compliance and multiple methods of compliance demonstration available. Be sure to highlight only those sections, or portions of sections, which reflect the chosen method of compliance and compliance demonstration. Also, be sure to include all of this information on the Form CD-01.

Also, answer YES to question 3d on form CH-03.

Once a Part 63 NESHAPs is triggered, additional requirements in the General NESHAPs Regulation (40 CFR 63, Subpart A) also apply to the facility. These include a requirement to develop a startup, shutdown and malfunction plan. Be sure to include a highlighted copy of Subpart A as well and include the requirements on Form CD-01.

- 7) If you answered "No" to question 5, it may be possible to avoid the section 112(g)(2)(B) requirement of performing a case-by-case MACT determination for your proposed project by proposing a federally enforceable permit conditions to limit your potential HAP emissions to less than 10 tons per year for each HAP and/or 25 tons per year for all HAPs combined from the new proposed project. Do you want to accept permit limitations on HAPs to avoid the section 112(g)(2)(B) requirement?
- No. Read 40 CFR § 63.43 to 63.44 to determine all applicable requirements, including application requirements for a case-by-case MACT determination and what is required for your facility when a subsequent MACT standard for your facility is promulgated. Provide your proposed case-by-case MACT determination with this application, using Form CD-01 to describe your proposed limits and methods of compliance demonstration.
- Yes. Go to question 8.

If a new source or a new project at an existing source emits more than the 10/25 tpy thresholds and there is no promulgated Part 63 NESHAPs, that source is required under Section 112(g)(2)(B) of the Clean Air Act to develop its own maximum available control technology (MACT) standard. If a source has potential emissions greater than the 10/25 tpy thresholds, it may be possible to take a permit limitation to keep emissions below the thresholds, so that no Part 63 NESHAPs apply, but sufficient operational flexibility is maintained. If you choose to take such a limitation, answer YES, and go to question 8.

If you choose to have a source remain a major HAP source and it is not subject to one or more Part 63 NESHAP, answer NO to question 6 and develop your own case-by-case MACT standard, following the instructions in 40 CFR 63.43 to 63.44. Include all the requirements in Form CD-01, noting that the requirements must include not only emission limitations and/or work practices to control emissions, but testing, monitoring, reporting and recordkeeping requirements as well.

A Part 63 case-by-case MACT standard also triggers additional requirements in the General Provisions of the NESHAPs Regulation (40 CFR 63, Subpart A), which also apply to the facility. Be sure to include a highlighted copy of Subpart A as well, and include the requirements on Form CD-01.

Also, answer YES to question 3d on form CH-03.

**8)** Briefly describe the limitations you would be willing to accept and abide by in your permit so that your HAP emissions will not exceed 10 tons per year for each HAP and 25 tons per year for all HAPs combined (use separate sheet if needed). Description must include all the HAP pollutants. Refer to the Application General Instructions for guidance in establishing these limitations, and include your proposed limit, monitoring, recordkeeping, and reporting on Form CD-01. Your facility may be subject to NESHAP for Source Categories requirements until you receive a federally enforceable permit limiting your facility's HAP emissions from the proposed project to below the major source thresholds. After providing your proposed limitations, you are finished with this form.

If a source is a major HAP source (emits more than the 10/25 tpy thresholds) and there is a promulgated Part 63 NESHAP, that source is required to comply with the MACT standard in the applicable Part 63 NESHAP. If a source has the potential to emit more than the 10 or 25 tpy thresholds, it may be possible to take a permit limitation to keep emissions below the thresholds, so that no Part 63 NESHAPs apply, but to maintain sufficient operational flexibility. Question 7 asks that the emission limitations be documented in the CD-01 form. Remember to include all requirements in Form CD-01, noting that the requirements must include not only emission limitations and/or work practices to control emissions, but testing, monitoring, reporting and recordkeeping requirements as well.

If a source is not willing to take a limitation on emissions of HAPs, is a major source for HAPs, and is subject to a Part 63 NESHAPs for the first time (answered NO to question 5 above), or there is not a promulgated NESHAP (answered NO to questions 4 and 6) then the change/project is a Title I modification and you should also answer YES to question 3d on Form CH-03.

### 3.3 Other Changes Triggering a Major Permit Amendment

#### 3.3.1. Significant Changes to Monitoring, Reporting or Record Keeping Requirements

Refer to Form CH-03 Major Permit Amendment Determination, Question 4.

Question 4) Does this modification change any permit conditions or amend existing permit requirements related to monitoring, reporting, or record keeping other than adding new requirements, eliminating the requirements if they are rendered meaningless because they apply to emissions that will no longer occur, or changing test methods if both the new and the old test methods are considered valid for the pollutant and source category (Minn. R. 7007.1500, subp. 1(A))?

Note that **any** changes to existing federally enforceable monitoring requirements (with the few exceptions noted in the question and in the rule) require a major permit amendment. Even if there is no physical change or change in the method of operating the source, changing the permit conditions alone is

enough to trigger a major permit amendment. A more complete listing of the exceptions is found in Minn. R. 7007.1500, subp. 1(A):

- i. Any significant amendment to existing monitoring, reporting, or record keeping requirements in the permit other than:
  1. adding new requirements;
  2. eliminating the requirements if they are rendered meaningless because the only emissions to which the requirements apply will no longer occur;
  3. eliminating one validated reference test method for a pollutant and source category in order to add another;
  4. eliminating the requirements that are redundant to or less strict than other existing requirements;
  5. eliminating the requirements that are technically incorrect where the elimination does not affect the accuracy of the data generated or of the monitoring information recorded or reported; or
  6. eliminating the requirements for a piece of equipment that no longer exists or has been permanently disabled from use at the stationary source;

All changes must be included on Form CD-01. Many permittees find it helpful to attach a copy of the requirements portion of their existing permit, and highlight those requirements which are proposed to be changed.

If the answer to Question 4 is NO, proceed to question 5.

### 3.3.2. Source-Specific Permit Conditions

Question 5) Does this modification establish or amend any source-specific permit condition that is required to be based on a case-by-case determination of an emissions limit or standard, an ambient impacts analysis, visibility, or increment analysis (e.g., a modeling-based limit, BACT, case-by-case MACT, etc.) (Minn. R. 7007.1500, subp. 1(B))?

If you answered any of the following questions as indicated, answer YES to question 5. All emission limitations and corresponding testing, monitoring, reporting and recordkeeping requirements must be included in Form CD-01.

If you answered YES to questions 5 or 6 on Form CH-07, you should answer NO to question 5 and include any site-specific limitations to avoid applicability of Part 63 NESHAPs in the answer to question 6 below.

If you answered NO to question 6 on Form CH-07, you should answer YES to question 5, and include the case-by-case MACT limitations on Form CD-01.

If Table 4 of Form CH-04a shows emission increases greater than the listed thresholds, or if Table 2 of Form CH-04b shows emission increases greater than the listed thresholds, and you can not or choose not to accept limits to avoid BACT, you should answer YES to question 5, and include the case-by-case BACT limitations on Form CD-01. Then proceed to Chapter 5 to complete the elements of a major PSD permit.

As noted on each of those forms, listing the emission limitations alone is not sufficient; corresponding permit requirements to demonstrate compliance with emission limitations must be included as well. Once completed, proceed to question 6.

If the answer to Question 5 is NO, proceed to question 6.

### 3.4 Case-by-Case Limits to Avoid Applicability

Sources may be able to install control equipment or take emission limitations to avoid the applicability of NSR/PSD or of Part 63 NESHAPs. Avoiding the applicability of Part 63 involves limiting HAP emissions from the entire source to emit less than major HAP source threshold (i.e. less than 10 tpy of any individual HAP and less than 25 tpy of all HAPS). Avoiding the applicability of NSR/PSD is more complicated, and there are several options discussed below, including:

- Source wide synthetic minor limits (limiting emissions from an entire source so that the source falls below the NSR/PSD emission thresholds (100/250 tpy)
- Project specific synthetic minor limits (limiting emissions from a proposed change so that the emissions from that change are below NSR/PSD significance thresholds); or
- Source wide netting (adding and subtracting reductions and additions at other emission units over the previous 5 years so that the net emissions increase of the change plus other reductions and/or additions is below NSR/PSD significance thresholds).

#### 3.4.1. Establish or amend permit terms/conditions for which there is no underlying applicable requirement

Question 6) Does this modification establish or amend any permit terms or conditions for which there is no underlying applicable requirement and that you have assumed to avoid an applicable requirement to which you would otherwise be subject? Such limits are usually synthetic minor limitations such as a limit on hours of operation. Please note that if you would like to add equipment under an existing emissions cap or limit, and the permit does not explicitly pre-authorize such additions, that is considered amending the limit or emissions cap. (Minn. R. 7007.1500, subp. 1(C)).

If a source does not want to go through a major PSD permit process, there are alternatives. These include taking limits ("synthetic minor" limits) on the changed units so that "after" (PTE) emissions are lowered and the increase from the project is below PSD significance thresholds. Contemporaneous emission reductions from other emission units at the source can also result in a net emissions increase from the project that is below the PSD significance thresholds. Both of these options require a major permit amendment with Title I conditions and are discussed below.

#### Synthetic Minor Source Limits

A source can take a limit on the entire facility so that it is not a major PSD source (PTE less than 100/250 tpy) and is not subject to PSD requirements. Review form CH-04, question 7).

Question 7) **Synthetic Minor Source:** Are you proposing federally enforceable synthetic minor limits on the PTE of the facility to make the entire facility (including the proposed modification) a synthetic minor source?

- YES. Submit an application for a major amendment. Put proposed limits on CD-01 form. Do *not* complete CH-04a or CH-04b.
- NO. Go to Form CH-04a.

If a source is willing to limit emissions of all criteria and PSD pollutants to less than 100/250 tpy (depending upon the answer to question 1), then the source is not a major PSD source and PSD regulations do not apply. The proposed emission limitation, along with requirements for testing, monitoring, reporting and recordkeeping to demonstrate compliance with such an emission limit, must be included in Form CD-01.

Note that the instructions to form CH-04b alert sources to this option. If, after working through Form CH-04b a source decides to take a synthetic minor limit, Form CH-04b should not need to be included in the permit application.

### Synthetic Minor Modification Limits

Alternatively, a source can take a limit on a specific project to keep the emissions increase from that project below the PSD modification threshold for that pollutant. Please refer to form CH-04b instructions on page 4 of that form.

It may be possible for a source to limit the emissions increase so that it is less than the PSD modification thresholds. In this case, the change is not a PSD or NSR modification, and a full PSD permit is not required. However, such a limit must be included in a major permit amendment on Form CD-01, along with requirements for testing, monitoring, reporting and recordkeeping to demonstrate compliance with such an emission limit.

### Source-Wide Netting

Finally, if a source is unable or unwilling to take either a source-wide limit (so that it is not a major PSD source and PSD regulations do not apply) or project-specific limit (so that the emissions increase is less than the significance threshold for the pollutant(s) with the increase), a source can "net out" by making sufficient decreases at other emission units at the source so that the "net" emissions increase is less than the significance thresholds, and a major PSD permit is not triggered.

Once you decide to "net out", you must include all creditable increases and decreases that took place during the contemporaneous period, as described below. It can be tempting to do what the MPCA sometimes calls "mini-netting." RESIST THE TEMPTATION! For example, suppose you are installing a boiler with potential NOX emissions of 55 tpy. This is above the 40 tpy threshold, and triggers PSD at an existing major source. You do not want to take limits on operation of this boiler, but it occurs to you that last month, for completely unrelated reasons, you decommissioned an old generator with actual NOx emissions of 20 tpy. It may seem like this results in a net increase of 35 tpy (55 – 20), but once you start subtracting the emissions from removed equipment, you've triggered source-wide netting and need to continue by subtracting and adding all creditable decreases and increases over the past 5 years.

"Netting out," as the instructions in Part D (page 9) of Form CH-04a note, is **source-wide netting**.

“Contemporaneous increases and decreases include all creditable increases and decreases beginning five years prior to start up of the proposed change or modification. Source-wide netting is a complex process. Refer to the rules (40 CFR § 52.21(b)(3)), visit the MPCA’s New Source Review website at <http://www.pca.state.mn.us/air/permits/nsr/>, or contact MPCA at (651) 297-2274 or (800) 646-6247 for guidance. If you have sufficient creditable, contemporaneous decreases, the net change may be below the PSD threshold, and the proposed changes would not be subject to NSR.”

If a source decides to undertake netting, all new emission limitations relied on must be included in the CD-01 forms, along with requirements for testing, monitoring, reporting and recordkeeping to demonstrate compliance with such an emission limit.

If you answered any of the following questions as indicated, answer YES to question 6 on Form CH-03.

- YES to Question g) of Form CH-04
- YES to Question 5 or 6 of Form CH-07

All emission limitations and corresponding testing, monitoring, reporting and recordkeeping requirements must be included in Form CD-01.

As noted on each of those forms, listing the emission limitations alone is not sufficient; corresponding permit requirements to demonstrate compliance with emission limitations must be included as well. Once completed, proceed to Question 7.

If the answer to Question 6 is NO, proceed to Question 7.

### 3.5 New Options Under NSR Reform

In addition to the baseline actual and projected actual emission concepts discussed earlier, the NSR Reform rules promulgated in December 2002 provide three new options for permitting. Because Minnesota is a delegated state (Minnesota directly implements the federal regulations), these options have been available in Minnesota since March 3, 2003.

Generally, the options are intended for those major NSR sources whose emissions are well controlled and monitored and who want or need increased operational flexibility. Note that the options enable the source to avoid New Source Review for certain changes, but do not exempt the source from Minnesota’s permitting rules.

A **Clean Unit Designation (CUD)** allows sources which have installed BACT (or BACT-like) controls on emission units to make changes to those emission units for 10 years without further review under PSD, so long as they do not exceed the BACT emission limits. However, this flexibility is only for the pollutant(s) for which the BACT limits apply, not for changes in any of the other pollutants. If an emission unit has a Clean Unit Designation for NO<sub>x</sub>, for example, any increases in other combustion pollutants (SO<sub>2</sub>, CO, PM<sub>10</sub>) must be permitted under “normal” NSR/PSD and Minnesota permitting rules. Minnesota permitting rules also still apply for the clean unit pollutant.

The **Pollution Control Project Exemption (PCP)** allows the installation or replacement of pollution control equipment without a PSD permit, even if there are "collateral" emissions increases in other pollutants, so long as those collateral emissions do not significantly impact the environment. For example, a source may install a thermal oxidizer to control VOC emissions from that unit, even though there are increases in NOx and other combustion pollutants. The rule includes a list of specific controls (including fuel switching) which are allowed, and a process for approval of non-listed controls. Note, however, that such changes may require permits under Minnesota rules, even though federal rules provide an exemption from PSD review.

The **Plantwide Applicability Limit (PAL)** sets a cap or plantwide limit on emissions of a pollutant, based on past actual emissions plus the PSD significant net emissions increase thresholds. So long as the emissions from the facility remain below the PAL, changes may be made for 10 years without obtaining PSD permit amendments. Note, however, that PALs are set on a pollutant-by-pollutant basis. Changes which result in increases in emissions of non-PAL pollutants must be permitted as though there is no PAL. Note also that the existence of a PAL does not affect the applicability of other state or federal rules. For example, an emission unit with an increase in emissions, even though these fit under the PAL, may trigger the applicability of an NSPS or state standard of performance or a permit amendment under Minnesota Rules.

Each of these options is discussed in more detail below. As of Spring 2004, very few of these options have been permitted in Minnesota (or elsewhere in the US, for that matter). Plan for some extra time to take advantage of these new options, as the MPCA and other stakeholders work through the options.

### 3.5.1. Clean Unit Designation

Go to form CH-03, Question 7.

**Question 7)** Does this application request a **Clean Unit Designation** under 40 CFR § 52.21(y) or 40 CFR § 52.21(x)(3)(iii) (re-qualifying where a previous NSR permit was issued)?

YES. Use and submit Forms CUD-01 & CD-01 to document conditions.  NO

One of the new options available under NSR Reform is a Clean Unit Designation (CUD). The NSR reforms exclude from NSR review for a period of ten years changes at a "clean unit" (i.e. a unit controlled to BACT/LAER limits or "BACT/LAER-like equivalent limits.") This change may be found at 40 CFR § 52.21(x) and (y). The Clean Unit designation is somewhat automatic (40 CFR § 52.21(x)) when an emissions unit goes through major NSR, and need not be applied for separately.

Major sources which seek to claim Clean Unit status under the "equivalent to BACT" provision for emissions units with controls installed prior to March 3, 2003, must apply for that designation by December 31, 2004. After that date, they must undergo a major NSR case-by-case determination (described below), if they have installed BACT/LAER level controls and wish to obtain a Clean Unit Designation for the emissions unit.

When a unit has been determined by the MPCA to be a "clean unit," it may be modified without a PSD permit, provided emissions do not exceed the emission *rate* limitation, work practice requirement, or change the basis for the clean unit designation which has been set by the permitting authority. This

includes increases in a unit's capacity. So long as the emission rate (lbs/hour, lbs/mmBTU) is not exceeded, an increase in capacity is allowed. For example, suppose a facility installs a new boiler with Selective Catalytic Reduction or SCR that triggers PSD, and obtains a PSD permit which includes BACT limits for the boiler for NO<sub>x</sub> emissions. Suppose that the new boiler was a minor modification for the other pollutants and the permit did not include a BACT determination for the other pollutants. That boiler qualifies as a "clean unit" for NO<sub>x</sub>, and so long as future changes do not exceed the lbs NO<sub>x</sub>/mmBTU limit in the permit, changes can be made without obtaining a new PSD permit.

However, the boiler is not a clean unit for the other pollutants, so all future changes must be analyzed to see if NSR/PSD applies or if a permit amendment is required for those changes, based on changes in emission rates for the other pollutants under both federal and state rules. Further, having a clean unit designation for NO<sub>x</sub> does not exclude future changes which result in changes in NO<sub>x</sub> emissions from state permitting requirements. For example, a minor or moderate permit amendment may be needed if small increases in NO<sub>x</sub> emissions (using Minnesota rule calculation procedures) result from future changes.

Units which do not currently have BACT or LAER limits may qualify for clean unit status if it can be demonstrated to the permitting authority that control equipment, work practices or pollution prevention practices are comparable to BACT/LAER limitations using a "substantially as effective" test. This compares actual emission rates to BACT/LAER rates, as published in the BACT/LAER Clearinghouse, as well as requirements for monitoring, record keeping and reporting. To qualify for CUD, some sort of emission control or work practice is required. Units without emission controls (i.e., intrinsically clean) may not be granted CUD status. In addition, non-BACT/LAER units must demonstrate that qualifying limitations do not cause or contribute to a violation of the NAAQS or PSD increment or any other Air Quality Related Value (AQRV) in place at the time of the decision. There must be an opportunity for public notice and comment on the decision to allow a clean unit status.

For example, suppose that BACT has been determined to be SCR for a certain size boiler, but a facility wants to install new, ultra-low-NO<sub>x</sub> burners, and the manufacturer warranties that the emission rate from the ultra-low-NO<sub>x</sub> burners will meet the same emission rate as SCR with conventional burners. That facility could apply for a clean unit designation under the "substantially as effective" test, demonstrating that the new, ultra-low-NO<sub>x</sub> burners will have similar emission rates as the published BACT. Note that the facility must have in place sufficient monitoring, reporting and recordkeeping to demonstrate that the technology will continue to perform at BACT levels.

Once a unit has been determined to be a clean unit, this designation remains in effect 10 years after the BACT equipment or work practices were implemented, unless the designation is lost through a modification or failure to maintain the unit as prescribed in the permit. A unit may re-qualify at the end of the CUD designation period by undergoing a major NSR permit review. The controls in place (or work practices) must again be shown to be equivalent to BACT/LAER limitations issued within the past five years (using the "substantially as effective" test). The source must demonstrate that the limitations do not cause or contribute to a violation of the NAAQS or PSD increment or any other AQRV in place at the time of the decision. There must again be opportunity for public notice and comment on the decision to allow a clean unit status.

Monitoring, record keeping and reporting must be equivalent to that required by Part 70. A clean unit designation must be included in an existing Title V permit. The permit will be open to public notice and comment through the major amendment process, either because the source undergoes major NSR review, or because a major amendment is required to incorporate a BACT-equivalent CUD.

Emission reductions at a clean unit (e.g. installing more efficient pollution control equipment) are not creditable for netting at any time during the clean unit period.

CUDs are pollutant-specific; the designation is issued for a single pollutant (e.g. an NO<sub>x</sub> clean unit on a boiler which has installed SCR). A unit may qualify as a clean unit for multiple pollutants, such as an existing boiler that installs a dry scrubber and fabric filter (for SO<sub>2</sub> and PM emissions) and SCR for NO<sub>x</sub> emissions. However, the source must provide a separate CUD demonstrations for each pollutant covered by a CUD.

**Note**

The clean unit designation (CUD) will be most applicable to clean, well-controlled industries. It will likely not be an applicable option for units or sources which are not well controlled, and where emission reduction credits will likely be more valuable.

Complex industries with both well-controlled and uncontrolled units may want to consider a clean unit designation for new, well-controlled units. For example, if a manufacturer installed a thermal oxidizer meeting BACT limits to control all or most of production VOC emissions, it could consider designating all those processes connected to the TO as clean units, allowing for multiple production changes so long as emissions from the TO remain below the BACT limits. Related emissions increases are not considered at clean units—as long as the emission rate remains the same, modifications can be made without undergoing NSR.

If an emissions unit is granted a CUD, changes are allowed to be made to that emission unit (provided the capacity does not increase and the CUD is not lost for whatever reason) for up to 10 years.

If the answer to Question 7 is YES (you are applying for a Clean Unit Designation for a unit which is not going through major New Source Review), fill out the Clean Unit Designation forms discussed below. If the answer is NO to Question 7, proceed to Question 8.

**Clean Unit Forms: CUD-01**

There are 3 clean unit forms: CUD-01 is the cover page, which works through the various options available under the Clean Unit Designation and directs sources to the other forms; CUD-02 is used when qualifying for a technology that is comparable to BACT; CUD-03 is used for those facilities which had a major NSR (PSD) permit issued prior to March 3, 2003 which contained BACT requirements.



There are three options for initially obtaining a CUD: (1) obtain a major NSR (PSD) permit using qualifying technology; (2) have a major NSR (PSD) permit issued prior to March 3, 2003 with BACT limits; or (3) installing equipment which is comparable to BACT.

<b>5) Initial Clean Unit Designation</b> Option 1 – Major NSR (PSD) permit application	<input type="checkbox"/> Necessary information included in BACT analysis
<p>If you're applying for a major NSR permit at this time, and the emission unit will automatically qualify for Clean Unit Designation because BACT will be implemented (provided that BACT requires that emissions be reduced below the level of a standard, uncontrolled, new emissions unit of the same type; and an investment is made to install or implement control technology), then no further forms are needed. All of the information needed for Clean Unit Designation should already be included in a complete NSR/PSD permit application with BACT analysis. If the NSR/PSD permit was already issued (prior to March 3, 2003), use Option 2. If you have not and will not receive a NSR/PSD permit, use Option 3.</p>	
Option 2 – Major NSR (PSD) permit issued prior to March 3, 2003 <input type="checkbox"/> Also submit Form CUD-03	
<p>For units automatically qualifying for Clean Unit Designation by having implemented BACT through a PSD permit issued before March 3, 2003, use Form CUD-03 for submittal of provisions to be incorporated into the Title V permit.</p>	
Option 3 – Comparable to BACT <input type="checkbox"/> Also submit Form CUD-02	

Use Form CUD-02 when seeking Clean Unit Designation for units controlled by technology deemed comparable to BACT.

- If the control technology or work practice was placed into service prior to March 3, 2003, CUD-02 must be submitted before December 31, 2004.
- If the control technology or work practice is placed into service on or after March 3, 2003, then the permit for the Clean Unit Designation must be issued prior to installation of the control technology.
- If the control technology or work practice was placed into service on or after March 3, 2003, and application for Clean Unit Designation was not submitted prior to installation, then Clean Unit Designation can only be granted if the unit applies BACT through a major NSR (PSD) permit, under 40 CFR § 52.21(x) (as opposed to “comparable to BACT” under 40 CFR § 52.21(y)). Use Option 1 if applying for a major NSR/PSD permit.

Choose one of the options noted above and fill out the appropriate CUD forms. Note that for Option 1, no additional information is needed beyond CUD-01.

Similarly, there are two options for re-qualifying for a CUD: Option 1) obtain a new NSR/PSD permit or Option 2) requalify by demonstrating that the existing control equipment is comparable to current BACT.

As with the initial qualification, a new NSR/PSD permit contains all of the necessary information from the BACT analysis, and no further information beyond that presented in Form CUD-01 is necessary.

**6) Requalifying after Expiration or Loss of Clean Unit Designation**

Option 1 – Through a new NSR/PSD permit.  Necessary information included in BACT analysis

You may receive a new NSR/PSD permit to requalify for a Clean Unit Designation. This means the control technology must meet the requirements of present day BACT (40 CFR § 52.21(x)(3)(iii)). No further forms are needed; all of the information needed for Clean Unit Designation should already be included in a complete NSR/PSD permit application with BACT analysis.

Option 2 – Comparable to BACT  Also submit Form CUD-02

You may requalify for the Clean Unit Designation by demonstrating that the control technology is comparable to present day BACT (40 CFR § 52.21(y)(3)(iv)). Use Form CUD-02.

If you have already had a CUD, and wish to have it renewed, choose one of the 2 requalifying options. If you choose option 2, use form CUD-02.

**Clean Unit Forms: CUD-02**

Form CUD-02 is used to initially qualify an emission unit as having emissions controls comparable to BACT, or to re-qualify a CUD, using the same approach.

	MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155- 4194	PERMIT AMENDMENT APPLICATION FORM <b>CUD-02</b> <b>CLEAN UNIT DESIGNATION FOR LIMITATIONS COMPARABLE TO BACT</b> Draft October 6, 2003
	Use this form to apply for the Clean Unit designation based on a level of emission control comparable to BACT (40 CFR 52.21(y)). Complete a separate CUD-02 form for each emissions unit for which you are requesting a Clean Unit Designation.	
1) AQ Facility ID No.: _____	2) AQ File No.: _____	
3) Facility Name: _____	4) Emission Unit ID No.: _____	

Note that a CUD is emission unit-specific and pollutant-specific. A separate CUD-02 form must be used for each unit for which a CUD is being sought.

5) Table 1: Control Technology or Work Practices						
5a) CUD Pollutant	5b) Control Technology or Work Practice	5c) Date Control Technology/Work Practice Placed into Service	5d) Seeking original CUD or Requalifying after Expiration or Loss?	5e) Control technology results in emissions reduced to below level of a standard, uncontrolled, new emissions unit of the same type? (Yes/No)	5f) Investment made to install control technology or implement work practice? (Yes/No)	5g) How is control technology or work practice comparable to BACT? (See instructions)
		<input type="checkbox"/> <input type="checkbox"/> Not yet placed into service	<input type="checkbox"/> Original <input type="checkbox"/> Requalifying	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe:	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

For each pollutant (column 5a), enter the control technology or work practice to be described in detail (use additional sheets if needed) (column 5b) as well as the date on which the control technology or work practice was placed in service (column 5c). If the technology or work practice has not yet been installed, check the appropriate box.

In column 5d, note whether this is an original application for a CUD for the emission unit noted or a requalification. In column 5e, note that the proposed control technology (or work practice) must result in lower emissions than a new unit **subject to all current rules and requirements**. For example, if a MACT standard has been adopted for a unit after the unit was first placed into operation and a CUD granted, the existing technology must meet at least MACT standards or it does not qualify for a CUD.

In column 5f), particularly for new applications, an investment must be made in the technology or work practice. If not, the unit does not qualify for a CUD.

In column 5g), compare the control technology to BACT requirements. There are 3 options as described in the instructions to form CUD-02:

- a. Equivalent to or better than current BACT
- b. Equivalent to or better than BACT at the time the control technology or work practice was placed in service, or
- c. Substantially as effective as BACT

All three options require comparison to technologies or work practices found in USEPA's RACT/BACT/LAER Clearinghouse (RBLC). A searchable database is found at: <http://cfpub1.epa.gov/rblc/htm/bl02.cfm>.

The first two options are straightforward, as technologies for the time periods in question are listed in the USEPA's RACT/BACT/LAER Clearinghouse (RBLC). The third option is a case-by-case determination by

the MPCA. Supplementary material should be attached to make the case that the proposed control technology or work practice is substantially as effective as BACT.

**6) Impact of Emissions -**

- No additional air quality analysis is necessary – attach completed Form MI-02
- Additional air quality analysis has been completed, submitted on \_\_\_\_\_ (date)

The impacts of emissions on ambient air quality must be determined. If an air quality analysis has previously been completed (e.g. when the original NSR/PSD permit was obtained), complete form MI-02 and additional information referenced therein to show that the basis for the original air quality analysis has not been changed. Reference or attach a copy of the original air quality analysis. If this is a CUD application for a new emission unit undergoing major NSR/PSD review, the information required will be contained in the NSR/PSD permit application, and you do not need to complete this form..

If no air quality analysis has been done, or if there have been changes since that analysis, a new, up-to-date air quality analysis needs to be performed and the second box checked in Question 6.

<b>7) Table 2: Comparable to BACT Limits and/or Work Practices &amp; Associated Monitoring</b>			
<b>7a)</b> Pollutant:	<b>7b)</b> Comparable to BACT Limit/Work Practice	<b>7c)</b> Monitoring/Recordkeeping/Reporting	<b>7d)</b> Existing Permit Number(s)

For each pollutant for which an emission unit is requesting a CUD, enter the BACT emission limitation. Keep in mind that "limit" is not just an emission rate; it is also required control technology and/or efficiency and operating parameters. Also note what monitoring, record keeping, and reporting requirements will be followed. For requalifying CUDs, use the information contained in the current permit. Any new information (new limits, monitoring, record keeping or reporting requirements) also needs to be written in the CD-01 Form.

<b>8) Table 3: Comparable to BACT Basis and Demonstration Requirements</b>		
<b>8a)</b> Pollutant:	<b>8b)</b> Basis of Comparable-to-BACT determination	<b>8c)</b> Periodic Monitoring
		<input type="checkbox"/> Included in attached CD-01
		<input type="checkbox"/> Not applicable – explain:

Describe the physical or operational characteristics that form the basis for the determination that the control technology or work practice is comparable to BACT. This can include but may not be limited to: total airflow, maximum VOC content, process throughput or capacity, raw materials or fuels used, hours

of operation, control efficiency, and/or other operating parameters. You may include this information by writing it in the lines provided or by attaching additional information.

Also note the monitoring reporting and recordkeeping requirements that should be incorporated into the permit on Form CD-01. Note that this is the same information as requested in Item 7 c above. It is not necessary to duplicate the information. Enter the information either on CD-01 or in Column 7c above, not in both places.

### Clean Unit Forms: CUD-03

Form CUD-03 is used to incorporate a CUD for an emission unit that was issued an NSR/PSD permit prior to March 3, 2003.

	MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155-4194	PERMIT AMENDMENT APPLICATION FORM <b>CUD-03</b> <b>CLEAN UNIT DESIGNATION</b> <b>BASED ON PRE-3/3/03 PSD PERMIT</b> Draft October 6, 2003
Use this form to document eligibility for the Clean Unit Designation based on an existing major New Source Review (NSR) permit issued before March 3, 2003 ( <i>40 CFR 52.21(x)</i> ). Complete a separate CUD 03 form for each emissions unit which has gone through major NSR in the last 10 years but before March 3, 2003.		

As with the other CUD forms, a separate form must be used for each emission unit for which a CUD is sought. For each emission unit for which a CUD is sought, and for each pollutant subject to Major NSR, complete the information required in columns 6b), 6c), 6d) and 6e).

<b>Table 1: Qualifying air pollution control technologies</b>				
<b>6a)</b> Pollutant Emissions Subject to Major NSR	<b>6b)</b> PSD Permit Number	<b>6c)</b> Emission Reduction Required? (Yes/No)	<b>6d)</b> Investment was made in a “qualifying air pollution control technology”? (Yes/No)	<b>6e)</b> Control Technology Qualifies Unit for Clean Unit Status? (Yes/No)
		<input type="checkbox"/> Yes <input type="checkbox"/> No – go to 6e	<input type="checkbox"/> No <input type="checkbox"/> Yes- describe:	<input type="checkbox"/> Yes <input type="checkbox"/> No

Emission units seeking a CUD, which have already obtained a major NSR/PSD permit, must demonstrate that there was an emission reduction required, that an investment was made, and that the control technology (or work practice) qualifies for clean unit status. This is particularly important for existing emission units. “Intrinsically clean” units do not qualify: there must be control technology (or work practices) which produce an emission reduction in order to qualify.

Again, for each emission unit for which a CUD is sought, provide the information required in columns 7b) through 7f) to determine the effective data and expiration date of the CUD.

<b>7) Table 2: Effective and Expiration dates of the Clean Unit designation</b>					
7a) Pollutant	7b) Date control technology or work practice placed into service	7c) Issuance date of major PSD permit	7d) Date that is 3 years after date in column 7c)	7e) Effective Date	7f) Expiration Date

A CUD will last only for 10 years from the effective date which is the earlier of : (1) the date on which the control technology or work practice was placed in service, or (2) three years from the date of issuance of the permit authorizing the installation of the control equipment. In no case can the effective date be earlier than March 3, 2003.

<b>8) Table 3: BACT Limits and/or Work Practices &amp; Associated Monitoring</b>		
8a) Pollutant:	8b) PSD Limit/Work Practice	8c) PSD Monitoring/Recordkeeping/Reporting

Enter the BACT limit or required work practice that constituted the BACT determination for the pollutant in column 8a. Keep in mind that "limit" is not just an emission rate; it is also required control technology and/or efficiency and operating parameters. You may write the information in the table provided or attach the relevant portions of the PSD permit.

Similarly, enter the monitoring, recordkeeping, and reporting requirements imposed by the PSD permit in association with the PSD limit and/or work practices. You may write the information in the table provided or attach the relevant portions of the PSD permit.

<b>9) Table 4: BACT Basis and Demonstration Requirements</b>		
9a) Pollutant:	9b) Basis of BACT determination	9c) Periodic Monitoring
		<input type="checkbox"/> Included in attached CD-01
		<input type="checkbox"/> Not applicable – explain:

Describe the physical or operational characteristics that formed the basis for the BACT determination. This can include but may not be limited to: total airflow, maximum VOC content, process throughput or capacity, raw materials or fuels used, hours of operation, control efficiency, and/or other operating parameters. You may include this information on the basis for the BACT determination by writing it in the lines provided or by attaching copies of the relevant portions of the application for the PSD permit.

### 3.5.2. Pollution Control Projects

Go to Form CH-03, Question 8.

**Question 8)** Does this modification qualify as a **Pollution Control Project** under 40 CFR § 52.21(z)(5) (unlisted project)?

Another new option available under NSR Reform is an exemption as a Pollution Control Project (PCP). USEPA has created a new category of projects which are exempt from New Source Review, even if there is an increase in emissions of regulated pollutants. This is also a new option—there was no similar test under the previous rules. This change may be found at 40 CFR § 52.21(b)(32).

The pollution control project exclusion (PCP exclusion) applies only to modifications of existing sources. New sources are ineligible. The proposed project must provide a “net overall environmental benefit,” for example, reducing VOCs from a manufacturing process using a thermal oxidizer. Such a project, would increase NO<sub>x</sub>, CO, and other products/pollutants of combustion. “Net overall environmental benefit” is not clearly defined numerically, and the MPCA has latitude in determining how large the net benefit must be. However, state permitting rules also apply, and those rules may require a permit (although perhaps not a major amendment).

A PCP exclusion can include installation of new pollution control equipment or replacement of pollution control equipment; it may also include work practices (e.g. leak detection and repair) or pollution prevention projects. Options other than listed pollution control or fuel switching projects (see below) will require a case-by-case analysis and a major amendment. There are some restrictions on qualifying projects. Any increases in emissions must still protect National Ambient Air Quality Standards (NAAQS) and all PSD increments, where such exist. Any increases must not adversely affect any AQRVs, such as visibility.

If a project qualifies as a PCP exclusion, it is defined as **not** a “physical or operational change” under NSR. Any emissions increases or decreases simply do not count in determining whether or not there is an emissions increase from the project. Of course, this cuts both ways—while increases do not count, neither do decreases in the pollutant controlled (VOCs in the example above). Thus, any decreases will not count as netting credits for any projects in the contemporaneous period.

Certain projects (listed projects) automatically qualify as PCP, as listed in the rule and preamble at the locations noted above:

- Flue gas scrubbing (SO<sub>2</sub>)
- ESP, baghouse, multi-clones—PM, HAPs, others
- FGR, low NO<sub>x</sub> burners, SNCR, SCR, catalysts (NO<sub>x</sub>)
- Oxidizers, incinerators, flares, condensers, absorbers, biofiltration (VOC- HAPs)
- Fuel switching (multi-pollutants)

Multiple fuel-switching projects, from a more polluting fuel to an “inherently less polluting fuel,” are automatically allowed. These include switching:

- from a heavier (higher sulfur) grade of fuel oil to a lighter fuel (e.g. from bunker fuel to diesel fuel or from off-road diesel to on-road diesel fuel)
- from any solid fuel (coal or wood) to natural gas, propane or gasified coal
- from coal to wood (excluding “unclean” wood such as demolition waste or treated wood)
- from coal to # 2 fuel oil (0.5% sulfur maximum)
- from high-sulfur to low-sulfur coal

Projects which switch from use of an ozone-depleting substance (ODS) to a lower or zero ozone-depleting substance are also automatically qualified, using the algorithm in the rule to determine the relative potency of each ODS.

Even if a project is not listed by rule, it may qualify for a PCP exclusion. The rules provide for a case-by-case qualification for installation or modification of control devices, work practices, pollution prevention projects. For those pollutants for which emissions increase (e.g. NO<sub>x</sub>, CO, and other products of combustion when installing a thermal oxidizer to control VOCs), the increase is calculated using the actual-to-projected-actuals test for improvements to existing sources.

Only air impacts are considered in determining whether there is a “net environmental benefit.” For example, ammonia “slip” when ammonia is added to reduce NO<sub>x</sub> in an existing source would need to be considered, but scrubber water or solids from installation of a scrubber would not.

For projects which undergo the case-by-case test, a permit application must be submitted which contains all calculations used to determine whether there is a “net environmental benefit” and any air quality analysis (if needed). The source may begin construction only upon receipt of a permit from the MPCA.

**Note**

The PCP exclusion should be used with caution. In cases where a source is uncontrolled or relatively poorly controlled, the reduction credits may be more valuable for netting for future projects within the contemporaneous period.

A more likely use of the PCP exclusion will be for upgrades to existing pollution control equipment. For example, a source could replace a VOC absorber with a thermal oxidizer to improve capacity of a production line or reliability of the control equipment or both. Although VOC emissions would be reduced, there would be minimal VOC credits. Similarly, upgrading PM removal in an ESP by adding ammonia injection may qualify, yielding small PM credits and small ammonia emission increases.

If the control technology or work practice is not one of the listed ones, it may use the case-by-case qualification option. If the answer to Question 8 is YES, fill out the Pollution Control Project Form discussed below.

If the answer to Question 8 is NO, proceed to Question 9.

Turn to Form PCP-01.



MINNESOTA POLLUTION CONTROL  
AGENCY  
AIR QUALITY  
520 LAFAYETTE ROAD  
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **PCP-01**  
**POLLUTION CONTROL PROJECT**  
**EXCLUSION**  
Draft March 9, 2004

3) Is your proposed Pollution Control Project listed in 40 CFR § 52.21(b)(32)(i) – (vi)?

YES, my proposed PCP project is listed. **Go to Question 4.**

NO, my proposed PCP project is not listed. **You need a major amendment for your PCP. Submit a complete major amendment application, including Form CD-01, and this completed form. Go to Question 6.**

If the pollution control technology or work practice is one of the ones listed, and there are no increases in emissions, you may not need a permit. Conversely, if the pollution control technology or work practice is not one of those listed in the federal rules, a major permit amendment is required to obtain a PCP exclusion.

4) Does your proposed project require a permit amendment under Minn. R. 7007.1150 through 7007.1500? (check appropriate box)

YES, my project requires a permit amendment. **Submit a complete application for the appropriate permit amendment, including Form CD-01, and this form. Go on to Question 5.**

NO, my project does not require a permit amendment. **Complete and submit the appropriate notification, including Form CD-01 and this form. Go on to Question 5.**

If there is an increase in any pollutant emissions (e.g. installation of a thermal oxidizer to reduce VOC and HAP emissions, but which increases NO<sub>x</sub>, CO and PM<sub>10</sub>), a permit amendment may be needed under MN rules. If a source chooses to modify other terms and conditions in the permit, a major permit amendment is also required. If there are no increases, and no changes to terms and conditions, then only notification is required under Minnesota Rules.

**5) Applicable Listed Pollution Control Project:**

Provide the type of listed project from 40 CFR § 52.21(b)(32)(i) through (vi) as well as the appropriate citation (e.g., "installation of low NO<sub>x</sub> burner on EU 010, 40 CFR § 52.21(b)(32)(iii)"). A listed PCP must also meet the following definition:

"...any activity, set of work practices or project (including pollution prevention as defined under paragraph (b)(39) of this section) undertaken at **an existing emissions unit** that reduces emissions of air pollutants from such unit. Such qualifying activities or projects can include the replacement or upgrade of an existing emissions control technology with a more effective unit. Other changes that may occur at the source are not considered part of the PCP if they are not necessary to reduce emissions through the PCP."

**6) Description of Project:**

Describe the project.

**7) Emissions Increases and Decreases** Use the following table to document the emissions increases and decreases.

7a) POLLU- TANT	7b) Baseline Actual Emissions (tpy)	7c) Future Potential Emissions (tpy)	7d) Projected Actual Emissions (tpy)	7e) Exclusions from Projected Actuals (tpy)	7f) Description of Exclusions from Projected Actuals	7g) Potential Emissions Increase (tpy)	7h) Projected Emissions Increase (tpy)
PM							
PM <sub>10</sub>							
NO <sub>x</sub>							
SO <sub>2</sub>							
CO							
VOC							

Complete the emission information requested. If a new piece of control technology is being proposed, with new emissions (e.g. a thermal oxidizer), use zero (0) for the baseline emissions that are due to combustion of fuel in the thermal oxidizer. For the controlled pollutant (VOCs) use projected actual minus past actual.

Exclusions from baselines are defined at 40 CFR § 52.21(b)(41)(ii)(c). They include capacity increases which were possible prior to installation of the control equipment. The quantification of the exclusions are entered in column 7e, with a brief description in column 7f.

Subtract column 7b from column 7c for each regulated air pollutant and enter the value in 7g. Calculate the projected emissions increase for each regulated air pollutant as follows and enter the value in 7h: "7h = 7d - 7e - 7b."

<b>8) Summary of Potential Emissions Increase – Use the following table to summarize the emissions of all affected units by adding the potential increases from 7g).</b>					
<b>POLLUTANT</b>	EU _____ Potential Increase (tpy)	TOTAL POTENTIAL INCREASE (tpy)			
PM					
PM <sub>10</sub>					
NO <sub>x</sub>					
SO <sub>2</sub>					
CO					
VOC					

Table 8 summarizes the potential emission increase for all pollutants for all emission units for which a PCP is sought (from column 7g). Decreases should be shown as negative numbers.

<b>9) Summary of Projected Emissions Increase -- Use the following table to summarize the projected emissions increase of all affected units by adding the increases from 7h).</b>					
<b>POLLUTANT</b>	EU _____ Projected Increase (tpy)	TOTAL PROJECTE D INCREASE (tpy)			
PM					
PM <sub>10</sub>					
NO <sub>x</sub>					
SO <sub>2</sub>					
CO					
VOC					

Table 9 summarizes the projected emission increase for all pollutants for all emission units for which a PCP is sought (from column 7h). Decreases should be shown as negative numbers.

<b>10). Additional Information</b> You must also include the following information with your notification or permit application. Indicate if this information has been included:	
<input type="checkbox"/>	<b>Monitoring and Recordkeeping</b> – Complete and submit Form CD-01. Include monitoring and recordkeeping and all methods that will be used on an ongoing basis to demonstrate that the project is environmentally beneficial. Methods should be sufficient to meet the requirements in 40 CFR pt. 70.
<input type="checkbox"/>	<b>Ambient Air Quality Demonstration</b> – Use Form MI-02 to determine what type of modeling analysis is required.

PCP exclusions must include sufficient monitoring, reporting, and recordkeeping requirements to demonstrate compliance with the emission limitations provided by the control technology or work practice. These should be included in Form CD-01.

An ambient air quality demonstration may be necessary to demonstrate attainment and maintenance of the NAAQS, MAAQS and PSD increments. This is particularly true when new emissions occur because of the control technology chosen (e.g. installation of a thermal oxidizer which generates NOx, CO and other combustion pollutants).

<b>11) Certification</b>			
<b>CERTIFICATION</b>			
I certify that the project will be designed and operated in a manner that is consistent with proper industry and engineering practices, in a manner that is consistent with the environmentally beneficial analysis and air quality analysis required by 40 CFR § 52.21(z)(2)(i) and (ii), with information submitted in this notice/application, and in such a way as to minimize, within the physical configuration and operational standards usually associated with the emissions control device or strategy, emissions of collateral pollutants.			
<b>Owner:</b>		<b>Operator:</b>	
Mr./Ms.		Mr./Ms.	
Title:		Title:	
Signature:		Signature:	
Date:		Date:	

This certification is required by the federal rules and must be signed by a "responsible official" (defined in Minn. R. 7007.0100, subp. 21), who is the person who performs policy- or decision-making functions for your company. (A delegate may be allowed in some cases. Please refer to the rule section listed above.) The certification also must be signed by a responsible official for each co-permittee. A co-permittee is a corporation, partnership, sole proprietorship, municipality, state, federal or other public agency other than the permittee that is either a owner or operator of the facility. If the permittee is the owner and a

co-permittee is the operator (or vice versa), then the responsible officials for both the permittee and the co-permittee must sign the certification.

It is recommended that you not sign the certification until you have completed your application/notification and are ready to submit it. Do not modify this form or the certification language. If your project requires a permit amendment as indicated in Question 3 or 4, you must also submit the certification form, CH-CR-01.

### 3.5.3. PALS (Plantwide Applicability Limits)

Turn to Form CH-03, Question 9.

 <p>MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155-4194</p>	PERMIT CHANGE FORM <b>CH-03</b> <b>MAJOR PERMIT AMENDMENT DETERMINATION</b> (FORMERLY MOD-10 MAJOR PERMIT AMENDMENT DETERMINATION) DRAFT 1/8/04
	<b>9) Does this modification establish, amend, renew, or distribute a <b>Plantwide Applicability Limit</b> under 40 CFR § 52.21(aa)?</b>

USEPA has created a new NSR option called a Plantwide Applicability Limit (PAL). Although PALs have been discussed since the mid-1990s and several already exist, the procedures for creating, complying with, changing, and renewing a PAL are now codified in rule. This change may be found at 40 CFR § 52.21(aa). Remember that this section, and the PALs codified in the rule, apply to major NSR sources.

The PAL permitted by the final rules is an actual PAL—it's based on a source's actual emissions of a given pollutant calculated as follows. All emissions from a source must be included—all emission units, including small and insignificant sources. The baseline emissions are calculated using the new method described above, using any 24 consecutive months in the past 10 years.

For example, consider a manufacturing plant which has past actual emissions from its three VOC sources of 75, 130, and 60 tpy for a total of 265 tpy. If any new emission units have been added since the baseline period, their emissions are added at the potential to emit (PTE). Any units which have been permanently shut down (shut down for at least two years or decommissioned) may be subtracted. As with baseline emission calculations noted above, any emission unit which has had controls added after the baseline period must adjust the emissions to account for the efficiency of controls. (For the sake of simplicity, we'll assume this manufacturing plant has not added or shut down any units since the baseline period.)

If, during the baseline period, an emission unit had emissions above current permit or emission limits, emissions above the limit must also be subtracted. For example, if the source which emitted 130 tpy had a permit limit of 120 tpy, only 120 tpy of emissions could be counted as the PAL baseline. Finally, the

significance level under NSR is added to give the PAL limit. Assuming the source is located in an ozone attainment area, the PAL for this manufacturing plant would be set at  $265 \text{ tpy} + 39 \text{ tpy} = 304 \text{ tpy}$ .

PALs are set on a pollutant-by-pollutant basis: there is a separate PAL for NO<sub>x</sub> and for SO<sub>2</sub>, or there may be a VOC PAL while all other pollutants are regulated on a stack-by-stack basis.

Once the PAL limit is set, changes may be made to the source without a permit amendment, provided emissions remain under the PAL (the PAL is not increased) and changes in emissions of all other pollutants do not trigger the requirement for a permit amendment. Units may be added or removed, modified or changed so long as emissions remain below the PAL, and no other triggers are tripped (e.g. triggering a NSPS or emission increases in other pollutants not covered by the PAL). This can provide a high level of operational flexibility.

The PAL emission limit does not increase or decrease, with one exception. If there is a current or near-future applicable rule the PAL must contain provisions for reducing the PAL limit to reflect those rules. For example, if a MACT standard will take effect in three years, with compliance three years following promulgation (compliance six years out), there must be a provision to reduce the PAL by the amount of control that the MACT standard will require. That reduction takes place on and after the compliance deadline of the new MACT standard. If the exact reduction is unknown at the time of the PAL issuance, a provision must be included to modify the PAL (modify the permit) at the time the reduction is known—in other words, when the MACT standard is promulgated.

PALs are 12-month rolling-average limits, expressed in tons per year (tpy). They are issued with a 10-year life span and may be renewed by applying 6–18 months prior to the end of the PAL life. If emissions during a new baseline period (any 24 consecutive months during the past 120 months of the PAL) plus the NSR significance level (e.g. 39 tpy for SO<sub>2</sub>) are within 80% of the current PAL limit, the current PAL limit can be kept for another 10 years. If, however, the new baseline period plus the NSR significance level is less than 80% of the current PAL, a new PAL limit is set in a manner similar to that used to set the PAL limit in the first place. In the example above, as long as emissions are higher than 204 tpy ( $204 + 39 = 243 \text{ tpy}$ , which is 80% of the 304 tpy PAL), the 304 tpy PAL can continue.

PALs may be increased, but only if you cannot comply with the existing PAL, and only after undergoing major NSR review of the entire source, including installation of BACT to all major and significant sources at the facility. The new PAL is based on BACT on *all* emission units operating at the time that the PAL increase is requested.

PALs may be adjusted (generally downward) if newly applicable standards come into effect (e.g. NSPS, NESHAPs), if a SIP requires adjustment, or if the permitting authority determines that the PAL will cause or contribute to a violation of the NAAQS or PSD increment or to an adverse impact on an AQRV identified for a Federal Class I area (*see 67 FR 80210 of the preamble*). Pending MACT rules will be the most likely to trigger a downward adjustment in a PAL.

When a PAL is issued, the permitting authority may eliminate all existing federally enforceable minor NSR limits taken in the past, provided that this does not cause or contribute to a violation of the NAAQS or PSD increment or to an adverse impact on an AQRV identified for a Federal Class I area.

Compliance with a PAL requires that the source have in place one of four systems:

- Continuous Emission Monitoring Systems (CEMS) or
- Continuous Parameter Monitoring Systems (CPMS) or
- Predictive Emission Monitoring Systems (PEMS) with Continuous Emissions Rate Monitoring Systems (CRMS) or
- Automated data acquisition and handling system (ADHS) as needed.

Emissions regulated under a PAL are not only emissions during normal operations but also emissions during startup, shutdown, maintenance, and malfunction periods. Compliance during these non-normal periods may be "excused" by the MPCA, but they still must be monitored using either the normal monitoring system or an alternative monitoring system. Records of all monitoring must be kept for the duration of the PAL period plus an additional 5 years. Semi-annual reporting to the permitting authority is required, with a monthly compliance determination with the PAL (the 12 previous months rolled up to show compliance with the PAL limits).

**Note**

PALs will be most useful to a relatively clean, active industry, where emissions are well controlled and changes in production are frequent. They will be least useful to "grandfathered" industries with emissions that are not well controlled and which do not have frequent changes in production that require permitting.

Note that establishing and renewing a PAL, while requiring a major permit amendment, are not Title I modifications. Increasing a PAL, or expiring a PAL and allocating or distributing emissions back across individual emission units are Title I modifications.

If the answer to Question 9 is YES (you are applying for a PAL), fill out the PAL forms discussed below. If the answer to Question 9 is NO, proceed to Question 10.

**Form PAL-01**

	MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155-4194	PERMIT APPLICATION FORM <b>PAL-01</b> <b>PAL COVER PAGE</b> DRAFT October 13, 2003														
	<b>4) THIS APPLICATION IS FOR: (check appropriate boxes):</b>															
<table border="1"> <thead> <tr> <th>Action Requested</th> <th>Required Form</th> <th>Required Permit Application</th> </tr> </thead> <tbody> <tr> <td> <input type="checkbox"/> ESTABLISHMENT OF A NEW PAL                             </td> <td> <input type="checkbox"/> PAL-02  <input type="checkbox"/> MI-02                             </td> <td rowspan="2"> <input type="checkbox"/> Major Amendment                      OR  <input type="checkbox"/> Part 70                 </td> </tr> <tr> <td> <input type="checkbox"/> PAL RENEWAL                             </td> <td> <input type="checkbox"/> PAL-03                             </td> </tr> <tr> <td> <input type="checkbox"/> PAL EXPIRATION ALLOCATION                             </td> <td> <input type="checkbox"/> PAL-04                             </td> <td>                     OR  <input type="checkbox"/> Part 70 Renewal                 </td> </tr> <tr> <td> <input type="checkbox"/> INCREASING AN EXISTING PAL                             </td> <td> <input type="checkbox"/> PAL-05                             </td> <td></td> </tr> </tbody> </table>	Action Requested	Required Form	Required Permit Application	<input type="checkbox"/> ESTABLISHMENT OF A NEW PAL	<input type="checkbox"/> PAL-02 <input type="checkbox"/> MI-02	<input type="checkbox"/> Major Amendment OR <input type="checkbox"/> Part 70	<input type="checkbox"/> PAL RENEWAL	<input type="checkbox"/> PAL-03	<input type="checkbox"/> PAL EXPIRATION ALLOCATION	<input type="checkbox"/> PAL-04	OR <input type="checkbox"/> Part 70 Renewal	<input type="checkbox"/> INCREASING AN EXISTING PAL	<input type="checkbox"/> PAL-05			
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<input type="checkbox"/> INCREASING AN EXISTING PAL	<input type="checkbox"/> PAL-05															

Establishing a new PAL, renewing a PAL, allocating emissions from an expiring PAL or increasing an existing PAL all require a major permit amendment. (Note that establishing a PAL and a PAL renewal are not Title I modifications, but the PAL is a Title I permit condition. Increasing an existing PAL and allocation emissions from an expiring PAL are Title I modifications.) Part 70 (Title V) permit amendments may also be required.

Check the appropriate box for the action requested, and go to the appropriate forms.

### Form PAL-02

	MINNESOTA POLLUTION CONTROL AGENCY AIR QUALITY 520 LAFAYETTE ROAD ST. PAUL, MN 55155-4194	<b>PERMIT APPLICATION FORM PAL-02</b> <b>DETERMINATION OF PLANTWIDE APPLICABILITY</b> <b>LIMIT FOR MAJOR NSR SOURCES</b> Draft January 6, 2004
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Form PAL-02 is used to set the PAL level. Table A requires that, for each pollutant, you list all of the emission sources which existed or were constructed during the baseline period chosen (any consecutive 24-month period during the past 10 years for which records are available). Table A also is used to determine if the emission rate from any of the emission units needs to be adjusted because emissions have since been restricted by newly applicable rules or permit conditions taken to implement those rules or to avoid applicability. Note that a separate table needs to be prepared for each pollutant for which a PAL is being sought. Note also that all emission sources must be included, including insignificant activities.

Table B requires that for each emission unit constructed after the baseline period, the potential to emit of that unit be included in the PAL calculation and documented. Similarly, Table C requires that for each emission unit which existed or were constructed during the baseline period, but have since been permanently shutdown or removed be excluded. (Note that you should include such units both in Table A and Table C, using the same emissions for each table).

Table D actually calculates the PAL level by combining the information contained in Tables A, B and C, and the PSD significance threshold for the pollutant for which a PAL is being sought. Table D also provides for future regulatory adjustments. For example, if there is a pending MACT standard which will be finalized by USEPA during the 10-year life of the PAL, a downward adjustment can be made to the PAL which reflects the effect of the MACT standard on emissions. (If the effect on emissions is not clear at the time of PAL issuance, the PAL can be re-opened when the MACT standard is finalized.)

Table E is a handy checklist for all of the information which must accompany a PAL application, to document the emissions and adjustments made in Tables A through D, the compliance information which is required in Form CD-01 to demonstrate compliance with the PAL, and other needed information (e.g. modeling information).

### Form PAL-03



MINNESOTA POLLUTION CONTROL AGENCY  
AIR QUALITY  
520 LAFAYETTE ROAD  
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **PAL-03**  
**PAL RENEWAL**  
DRAFT 2004

At this time, it is not anticipated that any sources will be renewing a PAL in the near future, so this form will not be available for some time.

### Form PAL-04



MINNESOTA POLLUTION CONTROL AGENCY  
AIR QUALITY  
520 LAFAYETTE ROAD  
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **PAL-04**  
**PAL EXPIRATION ALLOCATION**  
DRAFT 2004

At this time, there are no PALs that will be expiring soon, so this form will not be available for some time.

### Form PAL-05



MINNESOTA POLLUTION CONTROL AGENCY  
AIR QUALITY  
520 LAFAYETTE ROAD  
ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **PAL-05**  
**INCREASING AN EXISTING PAL**  
DRAFT 2004

At this time, it is not anticipated that any sources will need to increase an existing PAL in the near future.