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| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | CH-04e  Required elements for a PSD permit application  Air Quality Permit Program  *Doc Type: Permit Application* |

[**Instructions on page 2**](#_Instructions_for_Form)

**Purpose:** Use this form when establishing permit requirements based on the New Source Review/Prevention of Significant Deterioration Program (PSD) or amending existing New Source Review/Prevention of Significant Deterioration permit requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1a) AQ Facility ID number:** | |  | **1b) Agency Interest ID number:** |  |
| **2) Facility name:** |  | | | |

**3) PSD checklist**

3a) Table 1 Best Available Control Technology (BACT) analyses

| ***Pollutant:*** | |  | |  | |  | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Required** | **Complete** | **Required** | **Complete** | **Required** | **Complete** |
|  | |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |
| Note that sulfur dioxide (SO2) and nitrogen oxides (NOx) are precursors for particulate matter smaller than 2.5 microns (PM2.5). If SO2 is subject to PSD permitting, PM2.5 is subject to PSD permitting whether or not direct PM2.5 emissions are significant. Similarly, if NOX is subject to PSD permitting, PM2.5 is subject to PSD permitting whether or not direct PM2.5 emissions are significant.  Note that volatile organic compounds (VOCs) and NOx are precursors for ozone. If VOCs exceed the PSD permitting threshold, PSD permitting is required for ozone; if PSD permitting is required for NOx, PSD permitting is also required for ozone. Direct ozone emissions are not included in the determination of PSD applicability for ozone. | | | | | | | |
| ***Comments:*** |  | | | | | | |

3b) Table 2 Monitoring and modeling

| ***Pollutant:*** | |  | | |  | | |  | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Required** | **Protocol approved** | **Complete** | **Required** | **Protocol approved** | **Complete** | **Required** | **Protocol approved** | **Complete** |
| Pre-construction monitoring | |  |  |  |  |  |  |  |  |  |
| Source impact analysis (includes modeling for NAAQS\*) | |  |  |  |  |  |  |  |  |  |
| Class II increment modeling | |  |  |  |  |  |  |  |  |  |
| Class I increment modeling | |  |  |  |  |  |  |  |  |  |
| ***Comments:*** |  | | | | | | | | | |

*\*National Ambient Air Quality Standard (NAAQS)*

3c) Table 3 U.S. Environmental Protection Agency (EPA) submittals

|  | | **Complete** |
| --- | --- | --- |
| Submitted application to EPA Region 5? | |  |
| Additional impacts analysis | |  |
| Growth analysis | |  |
| Ambient air quality analysis | |  |
| Soils and vegetation analysis | |  |
| ***Comments:*** |  | |

3d) Table 4 Construction schedule

|  | | **Complete** |
| --- | --- | --- |
| Detailed schedule for construction | |  |
| ***Comments:*** |  | |

3e) Table 5 Class I submittals

|  |  |  |  |
| --- | --- | --- | --- |
| AQRV (Class I) analysis | |  |  |
|  | | Required | Complete |
| PSD application to National Park Service? | |  |  |
| PSD application to US Forest Service? | |  |  |
|  | | Protocol approved | Complete |
| Visibility | |  |  |
| Deposition | |  |  |
| Mercury | |  |  |
| ***Comments:*** |  | | |

Instructions for form CH-04e

**1a) AQ Facility ID number --** Fill in your Air Quality (AQ) Facility Identification (ID) number. This is the first eight digits of the permit number for all new permits issued under the operating permit program. If you don’t know this number, leave this line blank.

**1b) Agency Interest ID number --** Fill in your Agency Interested ID number. This is an ID number assigned to your facility through the Tempo database. If you don’t know this number, leave this line blank.

**2) Facility name --** Enter your facility name.

**3) PSD checklist tables** –

**3a)** In the left-most column of the rows of Table 1, enter the EU, TK, or FS reference for each new or modified emission unit that emits a pollutant that you determined to be subject to PSD (in Table 4 of form *CH-04d* or Table 5 of form *CH-04b*). Across the top of Table 1, enter the name of each pollutant that you determined was subject to PSD. Make copies of this table as needed to address all pollutants and units that triggered PSD; attach any copies to this form.

Note that SO2 and NOX are precursors for PM2.5. If SO2 is subject to PSD permitting, PM2.5 is subject to PSD permitting whether or not direct PM2.5 emissions are significant. Similarly, if NOX is subject to PSD permitting, PM2.5 is subject to PSD permitting whether or not direct PM2.5 emissions are significant.

**BACT Analysis.** If a best available control technology (BACT) analysis is required for that emissions unit for that pollutant, indicate it by checking the box in the “Required” column. Do not check the box if no BACT analysis is needed for that unit for the pollutant. (Explain why no BACT analysis is needed in the comments section of Table 1.) If a BACT analysis is required, check the box in the “Completed” column if you have completed the BACT analysis for this unit and that pollutant, and the BACT analysis is attached to the permit application. Each BACT analysis must follow the top-down process described in the *New Source Review Workshop Manual* (DRAFT, EPA 1990).

**3b)** Across the top of Table 2, list each pollutant you determined to be subject to PSD. (These pollutants should match those in Table 1.) For each pollutant, determine if the action in the left-most column is required. If so, check the “Required” box. If the action was required and you submitted a modeling protocol which the Minnesota Pollution Control Agency (MPCA) approved, check the “Protocol approved” box. Check the “Complete” box if the application submitted to the MPCA contains the item, completed as indicated in the approved modeling protocol.

Please note any unusual circumstances in the comment section of Table 2.

**Pre-construction monitoring.** Preconstruction monitoring is required as specified in 40 CFR § 52.21(m) unless waived by the MPCA. If the MPCA waived this requirement during the modeling protocol approval process, please make note of that in the comment section of Table 2.

**Source impact analysis.** Modeling to demonstrate compliance with all current National Ambient Air Quality Standards (NAAQS) and Minnesota Ambient Air Quality Standards (MAAQS) is required for each criteria pollutant for which PSD is triggered. NAAQS and MAAQS modeling must be completed for each averaging time for each criteria pollutant for which the project triggers PSD. Remember that a triggering a PSD analysis for a PM2.5 precursor (SO2 or NO2) requires a compliance demonstration for the PM2.5 NAAQS and triggering a PSD analysis for an ozone precursor (VOCs or NO2) requires a compliance demonstration for ozone.

**Class II increment modeling.** A demonstration that the Class II increment is protected is required for each pollutant for which the project triggers PSD and for which EPA has established increments. If increment modeling is triggered for a given pollutant, the modeling must address all averaging times for that pollutant.

**Class I increment modeling.** By EPA and MPCA policy, if the stationary source is within 300 kilometers of any portion of a Class I area and the project is subject to PSD for a pollutant for which Class I increments are established, modeling for Class I increment consumption is required.

Make copies of this table as needed to address all pollutants that triggered PSD.

**3c)** A copy of the PSD permit application must be submitted to EPA Region 5. A facility-wide additional impacts analysis is required in the PSD permit application.

**EPA Region 5**. The contact and mailing address for EPA Region 5 is:

Genevieve Damico  
Air Permit Section (AR-18J)  
US EPA Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

Confirm that you sent a copy of the permit application to EPA by checking the “Completed” box.

**Additional impacts analysis**. Details of how to complete the additional impacts analysis can be found in the *New Source Review Workshop Manual* (DRAFT, EPA 1990). The analysis includes a growth analysis, an ambient air quality analysis, and a soils and vegetation analysis. For each element of the analysis that you included in the PSD permit application, check the “Complete” box.

**3d)** Include in the permit application a detailed schedule for construction of the source or modification. Please note if the project is phased construction.

**3e)** The four Class I areas that may be affected by projects in Minnesota are Voyageurs National Park (located in Minnesota), Boundary Waters Canoe Area Wilderness (Minnesota), Isle Royale National Park (Michigan), and Rainbow Lakes Wilderness Area (Wisconsin). If the stationary source is within 100 kilometers (km) of any portion of a Class I area, an analysis of impacts on Air Quality-Related Values (AQRVs) must also be completed. (The exception is that visibility impacts need not be assessed for Rainbow Lakes Wilderness Area. A copy of the PSD permit application must also be submitted to the representative of each Federal Land Manager (FLM) for the Class I area within 100 km of the stationary source. The representative for the National Parks is Don Shepherd (National Park Service, 12795 West Alameda Parkway, Lakewood, Colorado 80228), while the representative for the Wilderness Areas is Trent Wickman (US Forest Service, 8901 Grand Avenue Place, Duluth, Minnesota 55808).

If you were required to provide the PSD permit application to the National Park Service or the US Forest Service, check the “Required” box. If you submitted the PSD permit application, check the “Complete” box.

Check the “Protocol approved” box if the MPCA approved your protocol for each element of the AQRV analysis. Check the “Complete” box if the PSD permit application contains the completed analysis for the element of the AQRV analysis.

Note any unusual circumstances in the comment section of Table 4.